Thesis.

by

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Cases in Clinical Surgery with Remarks.

In choosing the above as the subject for my graduation thesis, I have been guided by my inclinations, and by having been house-surgeon in the Glasgow Royal Infirmary under Dr Macewen there having the charge of about 60 Beds. Since then I have been engaged in private practice and have had several very interesting Surgical cases.

Compound Fractures.

All the following cases of compound fracture were treated on the strict Antiseptic system. i.e. Lister's System.

Case I. Compound Fracture of Humerus, Radius & Ulna.

J. M. Aged 23 years. a Labourer Residing in Glasgow. Admitted to the Royal Infirmary on Nov 8th 1878. Patient worked on the railway and while walking along the line, was knocked down by one train while trying to avoid another coming in the

opposite direction; he states that he was not run over.

On admission there was a compound fracture of the right humerus, the external wound was very small and bleeding was going on from it, though to only a slight extent. The fracture was found to be very oblique & situated about the middle third of the bone; the fragments not lying in position. Dr Macewen enlarged the wound and introduced his finger through the opening. He found the lower fragment had a very sharp upper joint which had evidently caused the wound in the skin. A considerable layer of muscle was found between the upper and lower fragments, and it was with some difficulty that this could be pushed aside. The sharp jointed lower fragment was then projected through the wound and the end snipped off with the bone pliers; there was then found great difficulty in keeping the broken bones in apposition, and this could only

be done by keeping pressure upon the end of the lower fragment. Various positions of the arm were tried but it was found that the best was obtained by forcibly extending and rotating in, but when this was relaxed the bones returned to their former position. Under these circumstances a layer of cotton wool was cut to fit the limb, this was then dipped in melted paraffine, and while the fingers were still on the wound keeping the bones in apposition, the material with three pieces of wooden splint imbedded in it, was applied to the limb, moulded to it, and quickly hardened by pouring cold water upon it; the pressure which had been kept up during the application of the apparatus was then removed. Opposite the wound an opening was cut in the case, to allow of the free escape of discharges, and the proper dressing of the wound. The wound was then thoroughly injected with 1-20 Solution of Carbolic Acid, and the usual antiseptic gauze

applied. A large external dressing encircled both splint & limb. In about two days it was deemed advisable to cut the splint along the top, to relieve pressure, as the hand had swollen somewhat. This was done but the splint was not removed and still acted efficiently. The dressings at first were changed daily, but soon less often, and the whole splint was thoroughly washed with Carbolic solution, which did it not harm, it being impervious, and the water draining away through holes made for the purpose on the under surface of the case. The discharge - at first bloody, then serous - soon diminished and the wound heal'd well.

In the same patient there was a compound fracture of the left Radius & Ulna, the wound was about an inch in length and at the lower third of the forearm; the Radial pulse could not be felt in this arm, but the fingers could be moved a little. The arm

was put up with two lateral splints, the bones first being brought in apposition, and the wound dressed antiseptically.

There were also several smaller wounds about the body viz:- A lascerated wound of the hip on the left side, one on the left heel, one on the left arm, besides bruising of the left shoulder posteriorly.

It will thus be seen in what a helpless condition the patient was, both arms being in splints, he had to be fed by the nurse. The man progressed most favourably and never had a bad symptom. The bones of the left forearm united well & firmly, and the arm became as useful as ever.

The right arm also healed well and the bone united firmly, but the movement of the arm was limited, as he could not raise it above a certain point, apparently from paralysis of the muscles supplied by the

musculo-Spiral nerve. The movement of the elbow joint was also limited but the patient had a most useful arm & hand.
The wounds about the body healed well and from the first the patient ate well and was very cheerful.
On Jan 24th 1879. he was dismissed well, having only been about 10 weeks in hospital.

I wish here to say a few words as to the treatment of this case, for the most favourable termination of it, can I think be attributed to it. Of course the health of the patient is of primary importance, and as this patient enjoyed robust health it tended greatly to facilitate his recovery, for the tissues being healthy, they could put forth their full power in the way of healthy granulations: but still all this being taken into account, the result of this case would not I venture to think have been so

satisfactory, but for the mechanical apparatus that was used. Suppose for a minute that that small wound had not been enlarged, and that the fracture had been put up as it came in to Hospital, What would have been the result when the surgeon came to examine it, say at the end of 6 weeks? It could have been none other but failure of union of the broken bones, for the layer of muscle would have been between the two fragments, and this we know to be one of the great causes of ununited fractures. Not only so, but to get this muscle out of the way was so difficult, that in only one position of the arm (viz forcible extension & inward rotation) could it be accomplished satisfactorily, and until the firm case for the arm could be prepared, this extension together with pressure on the fragments was kept up. A few years ago, when the antiseptic treatment of wounds was yet in its

infancy, what surgeon would have enlarged a wound in a case of severe compound fracture, to introduce his finger, to see how the fragments were situated; would they not ~~have~~ quickly have covered it up either with blood, or otherwise secured it from the air, and then put on splints. This I think would then have been done, and the surgeon would not have been justified without very good reason in exposing a larger extent of cut surface to the air. But thanks to the antiseptic treatment, if we have any doubt about a wound, it does not I think increase the patients risk to enlarge it and ascertain the exact injury, and thus obtain invaluable aid in our treament, in fact it is only right to the patient to do so. Let it be quite understood that I do not advise in every case of compound fracture to open it up, but only in cases where we may expect aid to our treatment, and then

only antiseptically. As regards the partial paralysis of the arm, the musculo spiral nerve must have been injured, either crushed or torn across at the time of the accident, as it was the paralysis of those muscles that affected the movements of the arm. As times goes on, the patient will I think gain more & more use of his arm, as it is, he can lift his arm to a certain extent, and the movements of the hand are quite good.

Speaking of ununited fractures, reminds me of two cases when I was a student. Both came into the same ward and both were operated upon, but in one, in addition to cutting down on the ends of the bone & nipping them off, silver wire was used to keep the two ends in close apposition, and this case healed well & the bones united firmly; while in the case where there was no wire used to keep the bones still, the fracture did not unite &

a second operation had to be performed and the wire used, before union was obtained. I remember well how annoyed the patient was that his first operation was not successful, and how he envied the other man.

Case II. Compound Fracture of Femur & Fracture of Humerus Radius & Ulna.

Wm G. Aged 29 years Railway shunting guard. Residing at Coatbridge.

Admitted to the G. R. I.ry December 8th 1878. About two hours before admission patient was uncoupling wagons, when he slipped whilst leaning over them and fell in between the wagons which were moving. He was at once brought to Hospital and put to bed. He was very weak and suffering considerably from shock to the system. His right arm & thigh were fractured and the lower limb lay twisted on its side as if useless.

First. There was a wound about two inches in length at the apex of Scarpa's triangle, leading into a cavity which the finger felt filled to a considerable extent with blood, and recognised the sartorius muscle bare; the femoral artery out of its sheath for about one and a quarter inches was felt beating; and a piece of bone which evidently had partly been the cause of the external laceration. There was a compound fracture of the right femur and the condyles were very much comminuted, and although there was an abrasion over them, at first there was no wound externally. The leg was twisted quite round & lying on its side. The thigh was a good deal swollen

Next. The right upper arm at the shoulder was found very greatly distended with fluid. The part being very tense indeed, so that no bone could be made out. There was a broad bruised circular mark going across the arm

just below the shoulder; such as would have been caused by a wheel passing over it. There was also a fracture of the lower third of the Humerus on the same side.

Next. There was a fracture of both bones of the forearm, about its lower third, and there was a wound just above.

The patient was in such a critical condition that it was determined to leave him alone and not perform any operation, as it would probably hasten his death, and he was not expected to live. The tense shoulder was ordered to be fomented, and the smashed thigh gently placed on a McIntyre splint, it was laid in it very loosely and put in as good position as was possible. The wound in the thigh was thoroughly explored and injected with 1-20 aqueous solution of Carbolic acid and dressed antiseptically. Patient ordered a nourishing diet

In spite of the severe injuries, the patient kept up his spirits wonderfully, and was quite calm. The fractures and wounds united well. The wounds were at first dressed daily until the discharge of serum lessened. The forearm was placed on an angular gooch splint to keep it steady and the fomentations to the shoulders continued until the swelling had somewhat subsided, which it did very gradually; on Jany 10th 1879 a few weeks after the accident a large quantity of callus was felt shewing how the bone at this joint had been smashed.

Patient could not have gone on more satisfactorily, and in about five weeks after admission the wounds were healed. The upper arm for about three inches was broken into fragments and these were much scattered as shewn by the very great thickening of bone found after the swelling had gone down. A considerable effusion of blood had taken place, this causing

separation of the fragments.
On Mar 18/79. The arm was examined and found quite firm, but the thickened state of the bone was felt now more distinctly.
On Mar 24/79. Patient was dismissed today well, could walk well, the bones of the thigh having united well and in good position. The motions of the arm were very good indeed, but the thickened state of the bone was of course still felt. There was also a projecting spine of bone at the shoulder, the end of which could be felt under the skin
The following is the chart of Rectal Temperature the average of these temperatures, or I should rather say the normal temperature is about 99·8° to 100°F.
The temperature was taken in the rectum to obtain more accurately the state of the patient and because it was thought to give a much better idea of any slight variation.

Rectal Temperature Chart in Case II. W.G.

	Inches		Even
Dec 10th	—	—	101·2°
11th	101°	—	101·6°
12th	101°	—	102°
13th	100·6°	—	102·4°
14th	100°	—	102°
15th	100·4°	—	100·4°
16th	100°	—	101·6°
17th	100°	—	101°
18th	99·8°	—	99·8°
19th	99·6°	—	100·8°
20th	99·4°	—	100·6°
21st	99·6°	—	100·6°
22nd	99·6°	—	100·6°
23rd	100°	—	100·4°
24th	99·8°	—	99·8°
25th	98°	—	Not taken

By this table it will be seen how very little rise of heat there was in spite of the grave injuries

A few of the reasons of this most favourable course are:-

1st Immediate removal to hospital.

This I consider most important or very important if not the most, for when a patient suffering from shock is taken from place to place before finally sending him to an Infirmary, and then perhaps sent in a rude jolting cart or wagon, it is easily understood how the shock is intensified, in fact some never rallying from it, and this it is, that as Professor Spence has pointed out, it is better for the patient to be treated near the scene of accident than to be taken a long distance to hospital and his chance of recovery is far better.

2 Absolute rest obtained for injured parts.

This is always recognised as most essential, not only in compound, but also in simple fractures. This patient was exceedingly quiet & obedient. the bones were thus able to be kept at perfect

rest, there was no jarring, and thus not so much risk of inflammation. It should be noticed that the temperature never rose above about 2°7.

3 Antiseptic dressings & treatment.

This I believe to be one of the secrets of success, not that I say the same result could not have been obtained from any other mode of treatment but this I do say, that undoubtedly nature was allowed to take its course more safely if I may so speak, with a greater chance of a successful issue. Putrefaction, the great destroyer, was completely prevented & kept from the wounds, and thus all irritation & inflammation prevented.

4. Patients good constitution & ability to take food.

This is most important and a thing that is often overlooked. When a certain result is obtained by a certain method of treatment it is often accredited to that treatment alone, and we are sometimes apt to forget that very

good results, and some say, as good results can be obtained by other methods than the Antiseptic. I think the great cause of all this is the strong constitution; the tissues are then in their most active & vigorous state, more apt to heal if severed, and repair much easier effected. This patient was a strong well built tall healthy looking man, and nature would have in him a good subject for her experiments.

The above Case of Mr. G. is the worst case of compound fracture I have seen recover without loss of limb. Owing to the tense swollen state of his shoulder, on admission, no fracture could be made out, in fact no sort of examination, but when this had subsided the state described above, with the projecting bony spine, was found. This bone Dr. Macewen said he would remove if the man liked, but

he thought he would like to keep it.
The man's complete recovery was a surprise to all who watched the case.

Case III. Compound Fracture of Tibia & Fibula.

Peter S. Aged 46 years, a labourer Residing at Glasgow.
Admitted to the G.R.I. Jany 2/79.
Injury was caused by the fall of two boxes of oranges, and patient said he had attempted to walk after the accident
On examination a compound fracture of the right Tibia & Fibula was found, the bones were much comminuted, and one portion of the Tibia was driven through the skin. The wound was 1½ inches in length: it was injected thoroughly with 1-20 solution of Carbolic Acid, dressed antiseptically and put up in a half box splint. The wound healed well and on Feby 18th the bones were firmly united.
On Jany 27th the half box splint was taken off

and the limb enveloped in Cotton wool saturated with hot Paraffine, and this moulded well to the limb. The whole was quickly placed in cold water when a hard case or splint of paraffine was obtained. This was much easier for the patient, as he could move it freely without disturbing the bones and was able to rise from bed sooner.
March 3rd Patient dismissed well.
There is very little to say about the case for the fracture although a bad one, healed well, as also did the external wound

Case IV. Compound Fracture of Tibia & Fibula

J. M. Aged 55 years A carter. Residing at Bridgetown.
Admitted Jan'y 2nd 1880
Patient was run over by a lorry which he said weighed 3 tons, the wheel going over his leg just above the ankle joint.
On examination the wound was found to be

about an inch in length with a good deal of bruised tissue about its edges; the whole circumference of the leg around the ankle was much distended and swollen; the toes were moved with very great difficulty and only to a slight extent. Over the leg generally there were a considerable number of Bulla, under which after a short time sloughs began to form, and the bruised tissue around the margin of the wound also gave way at the same time, leaving an aperture which bared the bone for a square inch and which also exposed a quantity of bruised tissues. After these sloughs had formed, a drainage tube inserted in the wound passed for a distance of about 5/2 inches downwards from the leg to the ankle.

The limb was at the first put up in a half box splint after being injected with the usual Carbolic Solution & dressed antiseptically. Afterwards as the sloughs began to separate

and the discharge to increase, a paraffine case made with cotton wool was fitted to the limb (as in cases before mentioned) and then cut into ~~two~~ halves, the upper half being removed during the dressing of the limb; abundance of apertures were made on the inner side for drainage. The limb was dressed daily, for the discharge was very profuse, and well injected and washed with Carbolic Solution. The splint acted excellently as it shed the water directly on coming in contact with it. Over the splint containing the limb a large Antiseptic dressing was placed so as to prevent access of unpurified air. The discharge continued very abundant for a good long time, and the bone was seen bare at the bottom of the wound, and in fact it was questioned whether amputation would not be ultimately required.

March 13. A large sinus still exists in the leg although the fractured bones have been well

united some time; the wound seems to enlarge instead of getting smaller. Patient ordered two bottles of Stout a day in addition to his nourishing diet. An opening was made a little lower in the leg to permit better drainage.

Apl 1. The wound on the front of the leg seems to be healing, but there is a large slough on the heel. The whole limb is slung by Salter's Cradle.

Apl 16. As the patient did not improve as well as could be wished, it was thought that a change from the ward air would do him good, so he was sent home, and dressings given him to use himself at home. While in Hospital, the rectal temperature ranged about 101° F, on one occasion reaching 104° F.

Patient has since returned to hospital to shew himself, and the leg had improved

very greatly, the change into the country having had the desired effect.

The two principal points to be noted in this case are

1 The severe injury – causing such an amount of sloughing &c.

2 The tedious recovery in hospital and quick convalescence on Removal home.

The history of the weight which went over the leg would almost have warranted amputation at once, without waiting for the result of the injury, but on first examination there did not appear so much damage done to the tissues as afterwards showed itself, but that tissue had been deprived of its vitality & so of course sloughed off. I well remember how tedious was the recovery in this case and how day after day no improvement could be seen, until the increased diet assisted nature a little, and although the bones united firmly, the tissues seemed very weak,

and the sinuses still remained, though to a less extent. It was then determined to send patient home for change of air, at least for two weeks to see if he would improve more rapidly. This had the effect of quickly causing the leg to heal, and when we remember that he had been in hospital over 4 months, confined to his bed for most of that time, and surraunded by influences that are not for the best, in the way of seeing other people suffer; I think it should suggest to us oftener than it does, the desirability of sending our Private patients for change of air when nature seems for the time to have exhausted herself, for we are often surprised at the result, on their return.

Case V Compound Fracture of Tibia & Fibula.

Lab B. aged 24 years a collier. Residing near

Aidrie, Admitted to G. R. I. Jan 29 1879.
Patient was following his usual occupation in the pit when a large piece of stone weighing about 1½ tons fell upon his leg.
On admission two wounds were found, one on the inner and the other on the outer side of the leg. The outer one was about an inch in length, & was much lacerated. On introducing the finger it passed into a large cavity three or four inches in perpendicular length in which lay the fractured Fibula.
The Inner was about ¾ inch in length, lacerated and the bone still protruding through it externally. A portion of the protruded Tibia which was sharp pointed was nipped off by the bone forceps, as it was impossible to bring the upper and lower fragments into apposition while this remained. The one wound communicated with the other. Both were thoroughly injected with 1 to 20 Solution

and the fragments brought together. A drainage tube was inserted from the outer opening which drained also the wound on the inner side. The whole leg was put up in a firm paraffine case, and an aperture cut in it opposite the outer wound. The inner wound was kept covered as it was intended to drain both wounds from one opening, and let the other heal up. The above apparatus was found very useful as it could be lifted en-bloc & put in a bath of carbolic solution, or washed freely. Antiseptic dressings were applied over the window & patient kept in bed. The wounds healed well and the patient progressed as favourably as he possibly could. The bones united firmly, & he was dismissed well Mar 31st. The old splint was given him to wear a little longer as additional support.

The above case is chiefly worthy of notice I

think from the splint used, which has been fully detailed above. Also both wounds being drained from the one opening, saved ~~more~~ exposure to the air, for after the first dressing the inner wound was never looked at until the splint was removed when it was found quite healed.

Case VI <u>Compound Fractured of Metatarsal Bones</u>

Alex Mc C. Aged 15 years A coupler of wagons. Residing at Carnkirk. Admitted to G.R.I. Feby 21/79. On examination, a lacerated contused wound about 4 to 4½ inches in length was found stretching across the inner side of the left foot, in a slanting direction. On introducing the finger the meta-tarsal bones were found broken & crushed and the ankle joint opened up, and its articular surfaces bare. There were also several other wounds on the foot & a bruise of the leg rather severe. The foot was very much infiltrated with blood, and the skin was tense. I immediately injected

the wound thoroughly with the usual Solution and dressed the case antiseptically; the patient progressed most favorably. Temperature rose two or three degrees but soon subsided. In a few days some sloughs appeared, one on the heel and the other on the outside of the leg due to the violence of the injury. The extensive wound on the inner side of the foot healed well, and the bones were found firmly united on Apl 2nd when patient was allowed to get up from his bed. On Apl 16th was dismissed Well.

The injury was caused by very great violence the lad was uncoupling wagons when his foot got between the rails and a crossing, and the wagon coming along crushed it. The question at first was, could the foot be saved; but I thought that if we could prevent suppuration, (and this we hoped to do, seeing patient was quickly brought to the hospital from the country,) we should have a good chance of a useful

limb, as the boy was young & healthy.
I therefore thoroughly injected it with 1-20 Solution
and placed the limb in a half box splint.
In these Railway injuries; it is very often most
difficult to tell amount of damage done; and
the force causing it, together with the state
of the parts, must be our guide.
The result of the case was all that could be
wished. The boy walked with a useful limb.

Rectal Temperature of Alex Mc C. Case VI.

		Morn	Even
Feby	22nd	100·4°	101·6°
	23rd	100°	101·2°
	24th	100°	102°
	25th	100·8°	101·4°
	26th	100·8°	101·6°
	27th	99°	101°
	28th	100·6°	99·8°
March	1st	99·2°	102·6°
	2nd	—	102·6°
	3rd	100·2°	101°

Mar	4 – ½	100°	99·4°
	5 – ½	99·8°	99·4°
	6 ½	98·6°	99·4°
	7 ½	99·2°	99·2°
	8 ½	99°	99·4°

Case VII. Compound Fissured Fracture of Skull.

Francis Mc In. Aged 20 years. A Bricklayer. Residing at Calton. Admitted Feby 16th 1880.

On admission I found the patient very weak & anemic, as if a large quantity of blood had been lost. His lips and the conjunctiva of the eyeballs were very pale, and his pulse weak. He was at once put to bed before the wound was attended to, as there was no bleeding just then going on. Strong beef tea made from Johnson's Extract of Beef (which is a very good preparation) was administered, and the man soon revived. The wound was situated on the left side of the forehead, running vertically

upwards from the outer border of the left eye for 2½ inches: in its centre it extended down to the bone for about an inch cutting all the tissues and periosteum. The bone at this point was fractured in two parallel lines, and in the same direction as the external wound, the lines were very small indeed but could be felt by the finger. Whether the fracture extended deeper than the external layer of the cranium of course I cannot say, but think it did not. The wound was linear and cleanly cut; At first, owing probably to the weak state of the man there was no bleeding, but on cleansing the wound, one or two spouting vessels required ligaturing.

The wound was dressed antiseptically, three stitches of Catgut uniting the edges. The extremities of the wound were superficial and it was only at the centre that the bone was bared. A little higher in the head there

was also a superficial scalp wound an inch in length but not of any great moment. The wound healed well and there was no unfavourable symptom, and 10 days after the accident it was quite healed and patient dismissed Feby 26th. As to the cause of it, I could never ascertain definitely, it must have been done by some sharp cutting instrument. Patient on admission was the worse for drink, and accused his landlady of doing it, but this he denied when sober the next day.

There were no head symptoms, but the patient was kept very quietly in bed for several days in case any should develope, and to prevent them if possible. There was no inflammation about the edges of the wound, and it healed with a linear scar.

Case VIII. Compound Fracture of Skull, by Porcelain.

Ann D.....n. Aged 52 years Residing in Glasgow

Admitted Jan 7 9½ 1879.

Patient was admitted into the female ward with a severe wound of the head, she was the worse for drink and rather difficult to manage. She was seen by a Doctor outside who finding the wound bleeding, stuffed it with lint, and advised her to go to the Infirmary. As the case was a very serious one I at once sent for Dr Macewen, as it was a question whether an operation would be required. In the mean time I examined the wound, & on removing the lint found an artery spouting, this I tied, There was also lying in the wound a very small piece of porcelain, which I took to be bone, and this I removed.

The wound was over the parietal bone on the left side, about 1½ inches in length & cleanly cut. The skull was fractured and a portion

of the bone (outer table) was lying loose and was removed, when there was found a piece of porcelain deeply imbedded in the bone passing down in a wedge shaped manner, the apex being towards the brain. A portion of this was removed with the dissecting forceps by Dr. In^c^ Owen while another portion still remained imbedded in the skull; as this piece seemed of very small size and as it was so firmly fixed that it could not be removed without causing severe bone injury, it was thought advisable to leave it, instead of trephining; it was however decided that should any head symptoms shew themselves trephining would at once be resorted to. From the fact that a portion of external table of skull was removed and after that a portion of porcelain from the internal table, and that still a further portion remained, it is likely that the other piece remaining, penetrated nearly to the dura-mater. The wound was

carefully washed with 1-20 solution and dressed antiseptically. The patient progressed favourably and was dismissed Cured Feby 6th just one month after the accident.

This was a most intersting case in regard to cause of the injury and also its most favourable course without any head symptoms although a small piece of porcelain, small I admit it was, remained imbedded in the skull. Patient although the worse for drink on admission was quite sensible, and she accused her husband of causing her the injury, which was a very severe one, as shewn by the pieces of external table lying loose, and the force to cause this amount of fracture must have been very great indeed. Yet from first to last there was no sign of the hurt causing any brain disturbance although there was a small foreign body present. As to the cause of the injury, it

was said that the woman fell on to a cup near some drawers, but we never could bottom the case; it was a very suspicious case, and we thought it right to acquaint the Police of her severe injuries, and to get at possible cause. Patient shewed herself some time after her dismissal and was then in good health and the scar looked all right.

In connection with the above cases of head injury and another I shall presently relate, I think we might with advantage take up the question of trephining. In the case just noted above, some surgeons would say, there was a foreign substance that ought to be removed as it might set up inflammation from irritation; but in this case, the porcelain was so very small, and to effect its removal would require a very severe operation; and so in this case it was determined, wisely I think

to wait, carefully watching ~~the case~~ for any signs of irritation, and should they shew themselves to at once trephine. As to the rule in these cases I think it must be a very general one indeed and each case must be treated on its merits If the porcelain had been of any size, I think trephining should have been done at once without waiting to see for symptoms, for the sooner it is done, the better chance for the life of the patient, for when irritation has set up inflammation, it is often too late to interfere to save the life, for the inflammation quickly spreads along the dura mater. But remove the source of ~~inflam~~ irritation, and then all the bad results are less liable to occur.

Trephining is done as a rule to remove pressure from the brain, which pressure also causes dangerous symptoms. To this there are a few exceptions eg in necrosis, it may be necessary to remove bone. also in punctured fracture of skull.

Dease, Desault, Abernethy & Brampton, say:-
"in fractures of skull with depressed bone, whether complicated with wound of scalp or otherwise, no attempt should be made to raise the depressed bone unless very decided symptoms be present of compressed or irritated brain". A great deal may be said on both sides; for if a depressed portion of bone be left, and this causes inflammation of the brain, surely it is better to relieve this pressure before any mischief is set up; and this I think should be done where there is an external wound. As to where there is no wound it will I think depend:-
1. On youth of patient
2- Force causing the injury
3. On the amount of depression
If the patient is young it is surprising what an amount of depression may occur without causing any bad symptoms, and

Professor Spence relates a severe case of ~~compound~~ fracture of skull in a child, where the skull was battered, so to speak, but which recovered without any operation, and without any unfavourable symptoms, the brain seeming to accomodate itself to the altered condition of the cranium. Of course the nature of the fracture must assist us, as if the bone is much broken or splintered, a sharp piece may project on to or into the brain substance, and obviously the sooner it is removed the better. In a case of depressed fracture, where at first there may be no urgent symptoms, suppuration may follow between the skull and dura mater or even more deeply.

Sir Benj Brodie & Sir Astley Cooper taught, that if the depression be exposed in consequence of a scalp wound, then trephine and elevate the bone, but if there be depression without a scalp wound, not to trephine.

Punctured fracture where there is usually splintering and depression of the internal table is an exception to the general rule of not trephining without urgent symptoms of pressure exist.

Professor Spence Sums up thus: (Vol II. Page 738.)

1. Without delay in all cases of distinct punctured fractures
2. In Cases of Compound fractures with depression
3. In simple depressed fractures, where after a fair trial of other measures, the urgent symptoms of compression are persistent.
4. In compression from extravasated blood, when the position of the injury, or existence of a fissured fracture indicate the probability of a large artery having been torn (Eg Middle Meningeal)
5. For intra-cranial suppuration, when the symptoms give an indication of the probable position of pus.
6. In certain Chronic cases for disease, or alteration in the bone following contusion or other injury, causing Cerebral symptoms, Eg Local Paralysis or Epileptic Fits.

As regards trephining over Sinuses. This does not debar from the operation, although it makes it a more serious undertaking. When I was a student Professor Lister trephined over the Superior Longitudinal Sinus for epilepsy following injury, and although he wounded the sinus, he was able to check the flow of blood, and the man made a satisfactory recovery. I give an extract of the Case from my Clinical Note book.

Case IX. D. B. Aged 59 years. History. While at work, a beer cask fell upon his head from the 3rd tier, and produced a scalp wound, which left a scar on the Vertex. Three months after the accident he was seized with * fits, which fits became more frequent, being followed by a feeling of soreness. Patient also suffered from headache, Vertigo, and burning pains. Ophthalmoscopic examination shewing Atrophy of Optic disc taking place, and one making pressure on the vertex with the finger, the pain in the head was

increased. On July 2/76. Mr Lister trephined in the middle line over the longitudinal sinus, which was wounded, and the blood gushed out; the piece of bone was removed by the elevator, the finger tip placed over the wound, and the haemorrhage arrested; pieces of catgut were then placed over the sinus, until the gut was above the level of the skin. The Case was dressed in the Antiseptic method, there was no more bleeding and the man made a good recovery. On Dec 11/76. Mr Lister again brought him before us. The pain was now gone, and he had never had a single fit since the operation the man's sight had improved, and he was now quite cured.

What gives the Case more interest to me is, that I had an opportunity of seeing the patient again some months after in the Medical wards of the Royal Infirmary, suffering from Chronic Bronchitis. He had kept quite well he said

in his head since the operation; the hollow in the skull where the piece of bone was removed could be easily felt. The poor man died of his pulmonary disease.

What the cause of the fits in the above case, was, a disputed point, some thing Ring there was a thickening of the bone causing pressure on the brain, but the bone appeared very little thicker than natural; I cannot tell.

In connection with these head cases, while house surgeon I admitted a boy sent from
ase. X the police office, into the G. K. Infirmary, who had fallen a height down a stair, and whose head was a good deal swollen on the right side. There was no scalp wound, and no fracture could be detected. He was ordered to bed, and to be kept quiet.

On admission the lad seemed dazed & confused as if suffering from concussion, but he was not unconscious. He remained in this state for

about 24 hours when he began to revive and talk to the patients around him, he gradually seemed to recover, was quite lively and intelligent, & would get up when the nurse's back was turned. All went on well for about a week, when one afternoon I was called hastily to the ward, and found the boy in a convulsions. He was unconscious, and there was twitching of the left arm & the outer corner of the left eye & eyebrow, with twisting of both eyes to the left side: this continued about twenty minutes when he vomited, and gradually came round. At the time I thought it possible the vomiting & convulsion might be due to Stomach disorder, as there were a quantity of vomited matters; but next day at visit I told Dr Macewen who at once went to see the boy. On manipulating the head over the seat of injury, a fit came on at once, with the same twitchings as before, & continued some time, after this they came on more frequently

and continued all day. Dr. Macewen then determined to trephine, but first got Dr. Roberton of Glasgow to see the case, when he at once concurred with Dr. Macewen. During the intervals of the convulsions the boy appeared lively, but was not himself at night I gave chloroform, and Dr. McEwen made an incision over the swelling on the left side of the head down to the bone; and having separated the periosteum, a fissured fracture was found stretching for several inches. The trephine was then applied and a piece of bone removed, when blood began to ooze from under the skull, and this hæmorrhage kept on for some time. The bone was at this point a little depressed, but very little. The wound was then dressed antiseptically, and the patient put to bed. I remained in the Ward during the night, and he appeared all night, but restless & rather excited; he did not sleep very long at once. Bromide of Potassium was freely

given. Next day, patient was a good deal better and the temperature which before the operation had been steadily rising, now began to decline. The patient was quieter and answered questions rationally. Wound was dressed today and looked healthy, he had no more fits, and made an uninterrupted recovery, never having a bad sign during all his recovery.

This most interesting case shews how carefully all head injuries should be treated until all chance of danger has passed away.
This boy to all outward appearance was quite well, until the first convulsion seized him after which they recurred at frequent intervals, and not until after the operation did they cease. The fracture being fissured and there being no external wound was not recognised until the operation, and then the trephine was placed over it, so as to make the fracture

divide the segment of bone to be removed. The immediate relief, shewed the correctness of the treatment.

As to the cause of the Convulsions. Most likely they were due to the pressure on the brain, caused by the blood which ran out of the skull during the operation; of itself it did not cause any mischief, but when external pressure was applied, as shewn by the manipulations, immediately a convulsion occured.

Guide to operation. One of the best guides in this case was the gradual rise of temperature. It rose to 103°7 gradually, for it was registered every two hours, and after the operation, it as gradually fell. It was an imperative call for interference, for it shewed that other mischief was being set up, or about to be set up, and this the trephining prevented or stopped. Again the convulsions occuring on the left side of the body, pointed to irritation of brain on

right side, and having the seat of previous injury on that side, shewed where the trephine must be used, if used at all.
This Case well illustrated the rule that "In Simple fractures of the cranium with slight depression, it is not good practice to trephine without urgent symptoms of compression occur, and then trephine at once.

Compound Fracture of Olecranon Process of Ulna

Case XI Dominac T. Aged 23 years A Quarryman Residing a Wishat. Admitted to G. R. I. April 7. 1879.
While about his work, patient fell down a Quarry 45 ft high, and was brought to hospital about 6½ hours after the accident.
On examination, the left elbow was found much swollen, and a wound about 1½ inches in length was situated over the Olecranon, running parallel to the arm. This wound led into a

cavity, and on introducing the finger, the bone was found fractured, and the fragment drawn up somewhat by the triceps muscle. I thoroughly injected the cavity with 1-20 Carbolic Solution; the arm was then placed in the extended position, with a straight splint to the inner side, a pad and bandage were applied in figure of 8, to keep the fragment in position. On Dr. Macewen seeing the case next day, he found the above mentioned state of parts, the joint being opened up, and the broken fragment turned with its articular surface outwards. It was with the greatest difficulty that it could be kept in position, but by being held firmly until a Paraffine case was applied (in the same way as Case I.), it was retained in position. An aperture was then cut in the case to allow drainage of discharge, & the dressing of the wound. A large Antiseptic

dressing was applied over all. The wound healed well, and the patient was dismissed Well May 22nd.

This case is of interest more from the exposure to the joint, and the mode of treatment than anything else. The man must have fallen upon his elbow with such force as to break off the olecranon process, The wonder was the injury was not greater. As regards the paraffine case I cannot speak too highly of its use, for it keeps the bones in accurate position, and yet allows the dressing of the wound without any movement of the splints as would occur if ordinary wood splints and bandages were used. As to the use obtained in the joint I am sorry I cannot place it on record, as my term of duty expired while the man was still under treatment, but I learnt afterwards he got well.

Fatty tumor of side.

I now wish to report a few cases of tumors that have come under my notice recently, and in two cases out of the number I removed the growth successfully.

The first is one of a fatty tumor of the side.

Case XII M. G. Aged 35 years, a labourer, formerly a Jointsman on the Railway. Swelling was first noticed over two years ago, when the man was ill, and his wife having occasion to rub his side, noticed a lump which she described as being about the size of a Bantam's egg, she asked her husband what it was, but he had never noticed anything. It gradually got larger, but for sometime the man declined to have it removed. It has never given him much trouble, except when he laid on the side it was on, when it sometimes used to "jump", but on pressing the swelling this sensation used to go off. No pain was felt in it until about a week before the

operation, which he had determined to submit to.
On examination a tumor situated on the right
side and over the lower ribs was found, freely
movable over the subjacent tissues, and about
the size of a small orange. The swelling was soft
and elastic almost amounting to fluctuation.
There was no pain on manipulation.
operation. On March 2nd 1880 assisted by my friend
Dr Tacey who administed a mixture of Ether & Chloroform
I made an incision, in an oblique direction from
before backwards over the surface of the tumor,
for about four inches. The skin and subcutaneous
tissue (which was pretty well loaded with fat)
were then dissected back, and the tumor exposed;
it was then enucleated partly by means of the
handle of the scalpel, and partly by a few touches
of the knife, the fingers being also used to
separate it. The wound was then sponged, but
no vessel required a ligature, and the edges
were brought together by silver sutures inserted

deeply. Lint soaked in Carbolic Oil was then freely applied, and the whole kept in position by bandages. There was very slight oozing. Patient was a very stout short muscular man, and began to struggle a good deal when the Chloroform was first administered, but after the operation he quickly recoved from its effects The wound healed well, most of it by first intention, except where the drainage tube was, and the patient never had a bad symptom, his temperature remained normal throughout. I saw the patient the other day (about a year after operation) and examined the scar, which was contracted to about three inches long. The man said he had no pain, and no trouble with his side.

On examination of the tumor after removal, it was found to be an ordinary fatty tumor, lobulated, and enclosed in a capsule, and about the size of a small orange.

The only other tumor or swelling, that it might have been taken for, was a Chronic Abscess, but the history of the growth, its situation, and the sense of touch shewed it could not be an abscess, although at first there was a little doubt.

Epithelioma of Hand.

Case XIII Mrs ~~Adams~~ Aged 72 years, a strong wiry looking old woman came under my care suffering from an ulcerated swelling situated on the back of the right hand. The swelling began as a pimple about six months before, which resulted from a bruise, she having struck her hand against the edge of the table, this never properly healed was very painful, and little blue lumps came all round it, these began to break and the ulceration to increase, the pain now became at times most severe, making her jump all at once while at her work, preventing her from sleeping at night, giving her no rest

in any position, for she said she could neither sit, lie nor stand with comfort, in fact she was made quite miserable by it, and thought it would kill her.

On examination there was found a small hard swelling adherent to the skin, ulcerated at its apex, and having the appearence of gradually spreading, as its nature at first was rather obscure, it was freely cauterised with a stick of Nitrate of Silver, and this was done on several different occasions but with no benefit, in fact it seemed to spread quicker. The patient was now told she must have it removed, as that was the only thing to be done for it, to this she consented as she felt her life to be a misery, owing to the great pain.

On July 8th 1879 I removed the tumor from the hand together with a little of the surrounding skin, so as to get clear of the disease. Dr Tacey

again kindly administed Chloroform & Ether
The incision was made in the length of the hand
from the wrist downwards, and then on
reaching the swelling, was made to diverge
included the tumor, and converged near the
fingers. The mass was then dissected from the
subcutaneous tissue, and no adhesions were
present to the tendons. The wound was then
sponged with Carbolic oil, and the edges
brought together with silver sutures; they
would not meet in the centre of the wound
owing to the removal of skin, but a deep
suture was placed in & the whole bulk of
tissues drawn nearer together, the centre
being left to granulate; The wound went on
well & healed except at the centre, where
there appeared some hard raised up granulations
these were freely cauterised, and all healed
well. The hand at first the woman said
appeared weak, but by use the strength

quickly returned, and now two years after the operation, she says it is her best hand. The scar has contracted, and looks healthy and there has been no return of the disease There has been no pain in it, since it healed and the patient has been healthy & strong since She is now under treatment for an inflammation of the neck brought about by using a strong liniment recommended by a friend for a pain in the muscles of the neck.

Remarks. This was a very interesting case for several reasons. There was the age of the patient 72 years, not a very favourable time for the process of healing; then the size of the tumor was such that one could hardly have credited it causing all the pain, situated as it was away from most nerves of any importance - it would only be about the size of a small bean. Again the relief from the removal of the growth; this was a very

gratifying, as it encourages one to operate on these things with every chance of immediate relief, and lastly its non-recurrence up to this date, (two years after the removal). Mrs A is now 74 years old and except for her present illness from which she is recovering, has enjoyed good health. She says she has a good constitution and I believe it.

As to the diagnosis, this I think I was shewn by the nature of the growth - hard, and spreading rather fast - by the severe pain and this I think is the most important symptom in this case - by the duration, only six months, - by its ulceration (altho' simple tumors do sometimes ulcerate) - and by the behaviour under the Nitrate of Silver treatment.

Medullary Cancer of Femur.

Case XIV W. C. Aged Six years, a pale faced looking boy suffering from an immense tumor of the thigh.

History. On Sunday Feby 29th 1880 I was called out of bed during early morning to see a boy whose leg was said to be bleeding, he having burst a blood vessel. I could hardly understand the message, but went at once to the house, where I found W. C with a large tumor of the thigh coursed over by large blue veins in nuts, and it was from one of these veins that hæmorrhage had occurred. Tuss ball had been applied and it had stayed the bleeding before my arrival. on enquiring the history of the Case, the mother said he had been suffering for months. that it began in a swelling just above the knee, which gradually increased; She consulted a medical man, but the nature of the case does not seem then to have been very pronounced, as it was ordered to be poulticed

and in a few days the doctor introduced a needle into the swelling, and the mother says nothing but blood came away. The parents became dissatisfied and sent for a female bone-setter who treated the case for some time. However the disease steadily increased until when I saw the boy, nearly the whole of his thigh was involved. The tumor was tense and fluctuating and obviously expanding; the surface was smooth except where the large veins above mentioned ran in deep groves or channels:-
I told the parents of the serious nature of the disease, and later in the day saw the case with Dr. Tacey. We then frankly told them the probable, or rather the certain termination the case would take, and that the only chance for the poor lad was immediate amputation, and that at the hip joint; we thought that there would just be room for the flaps

for that amputation but that it must be performed at once, if at all. The parents refused to give the boy the chance, and it was too late in a few days had they then wished it, for the tumor rapidly spread, involving the whole thigh; it expanded very much and one day a crack appeared in the skin, which quickly deepened, and the tumor burst, discharging a large quantity of blood and semi-fluid material. The whole thigh was now reduced to a pulp, and the patient rapidly sank & and died on 15th March 1880.

The above case, was a very painful one, both from the mode of its termination, and also the youth of the patient. Although tumors do burst, and end fatally that way, yet it is not the ending we look for as a rule, and the condition of the boy was painful in the extreme. If the patient had had amputation at the hip-joint performed at once, I think there

might have been a chance for him, but it would have been a very poor one I must admit, considering his weak, anemic condition - His appetite had failed; still seeing it was the poor lad's only chance, we were willing to run the risks of the operation; When the mother saw the tumor burst and the wreck of the limb, she said she wished amputation had been performed.

This case well illustrates the madness I must say, of ignorant people dallying & putting off time with bonesetters, but even in my own very short experience, I have been astonished at the number of people placing themselves under the care of a Quack, and allowing him to apply the most powerful caustics to swelling of all kinds, from enlarged glands to cancerous tumors; and yet some of the patients that do this, consider themselves educated.

The Diagnosis of this case was unfortunately too evident when I first saw the case. The peculiar form of the tumor, Spindle shaped - its rapid growth - the pain although this was not at times very severe except the limb was touched, the poor boy held out his hands at once when you came near him to keep anyone from his leg; and finally its appearence after it burst.
No Post Mortem was obtained.

Aneurism in Popliteal Space.

Case XV This case of tumor is different altogether from the previous ones, being due in the first place to an affection of, or injury to an artery.
The patient was a man about 35 years of age who was admitted into the Glasgow Royal Infirmary for Varicose veins of the leg.
He complained of great pain in the whole leg especially after exertion, and this had

become so great, that he determined having something done for relief. The man was put to bed for several days, while his case was under consideration. One night I went into the ward and was examining the leg when on pressing behind the knee, I felt a lump which distinctly pulsated, this we had not noticed before, but on questioning the man, he said he had known about it for some months but did not think to mention it. On the following morning he was examined by Dr. Macewen who confirmed my opinion as to Aneurism. The tumor was about the size of a very small orange, firm, and distinctly pulsating, which pulsation was expansile and synchronous with the heart's action. On firm pressure it could be reduced, or almost obliterated, but on relieving the pressure, it filled again at once. There was no particular

bruit heard over the swelling -.
The man was now informed of the nature of his disease, and the ligature of the femoral artery recommended: to this he agreed and on Nov 2nd 1878 Dr. Macewen ligatured the femoral artery at the apex of Scarpa's triangle with Chromic Acid Catgut. I gave the Chloroform. The artery was easily found and the gut put round it, the wound was closed by several sutures, two of which were of the same material as the ligature round the artery. These two were deep stitches and were inserted chiefly to give an indication of the length of time during which the ligature round the artery would resist the action of the tissues; the other stitches were superficial and composed of carbolised Catgut.
The pulsation ceased in the aneurism immediately after the ligature, but to a slight extent returned afterwards, due no

doubt to the establishment of the collateral circulation. The patient recovered well, never having had a bad symptom. His temperature as tested daily remained normal and he rested well, although complained a little of his leg aching. The limb was wrapped in cotton wool, and the case dressed antiseptically. The wound was not looked at until a week after the operation as the patient was quite well, as shewn by the absence of pain, the state of the temperature, and general ease of the patient, when it was found all but healed. There was not the slightest inflammatory blush. The Carbolised catgut stitches, as well as the carbolised catgut drain (which had been used at the operation) had undergone their usual absorption by the tissues, while the portions external to the wound were found loose, some parts in the dressing, the

others on the surface of the delicate epethelium. The two chromic acid stitches, on the other hand, were found firm and were not removed. The dressing was now reapplied and the state of parts looked at in another week. A fortnight after the operation, one of these chromic acid catgut stitches was found to yield slightly on traction, but would not of itself come away; it was then cut and withdrawn, when the portion that was most deeply seated in the tissues was found to be slightly softened, swollen, and white, and yielded on firm traction. The other stitch was also cut and removed; and it was found that, although the internal part was changed in color and swollen, it still held firmly. What makes this case more interesting to me is, that under Dr. Macewens direction, I assisted him in his experiments of the catgut in the chromic acid & glycerine

solution, and I see that in a recent number of the British Medical Journal, he has publish-ed his results.

Regarding the aneurism itself, the pulsation ceased entirely at the moment of ligature and on reference to my notes I found it did not return; so I must correct my former statement, as my memory has not served me correctly. The tumor began to diminish, absorption taking place slowly. After the operation as I before said the patient slept and ate well, had no pain and made an uninterrupted recovery.

Some months after on a visit to Glasgow, I had an opportunity of seeing the man. The lump had almost disappeared, and he was quite well, save for a little aching in the leg occasionally; this may have been due to slight diminished circulation in the limb, the collateral circulation not

being quite equal to the task of complete blood supply as yet, or it may have been due to his varicose veins of the leg which were not touched; it being thought advisable to cure the aneurism if possible and see the effect on the veins, as there must have been some pressure on the popliteal vein before.
The above case seems to point to the fact that antiseptic ligature of arteries seems to be one of the safest, surest, and least painful methods of curing aneurism.
Of course this cannot be done in all cases as in a case of abdominal aneurism which I saw in Edinbro Royal Infirmary when a student; the case was given up by the physicians and sent to the Surgeons to be operated upon. The aneurism was too high in the abdomen to allow of pressure above it, but the pressure was applied on the distal side, but the case was not at all

a satisfactory one as the patient died the following day. Pressure in this case was kept up if I remember right for about 10 hours, the patient being kept under chloroform during the time.

The above case of popliteal aneurism, I briefly reported in the British Medical Journal for Feby 1879.

Severe injury to Hand - Partial Amputation Sep 28th/80

Case XVI Walter P. Aged years, was brought in a cab to our surgery suffering from a lacerated hand the result of it being drawn into a hay horse chopper while feeding the machine. The hay became choked near the knives, and patient was relieving it with his hand, when it was drawn under the rollers, and the whole of the fingers and the thumb of the left hand were taken off, and only hung by shreds of skin.

On Examination - the whole of the thumb with the

exception of the extremity of the meta-carpal bone next the wrist, and all the fingers, were gone, and the bare heads of two of the meta carpal bones were seen glistening covered with their cartilage. The bones were quite cleanly cut but there was a good deal of laceration of the soft parts, some of which were hanging in shreds and were removed; the tendons were severed and torn, and lying together with particles of hay in the wound.

Dr Tacey and myself attended to the man, the bones that were cut or fractured had their ends straightened off by the forceps, and brought to such a length, that the stump became in the form of a cone; there was not sufficient skin to cover the large surface exposed, but we thought it best to allow the wound to granulate up, than to perform an amputation at the wrist, the only other resource.

We determined if possible to save a movable

stump, as the man had his living to get which would be useful although without fingers or thumb.

The hand was cleaned from the dirt and hay, and the bleeding vessels ligatured, as the palmer arch was divided; the hand seeming to have been cut across obliquely. A small flap of skin which had escaped the knife, was brought over, and covered a small portion of the exposed surface, and secured by a silver suture. The whole stump was then thoroughly steeped with diluted Carbolic Acid Solution, and dressed with Carbolic Oil.

The following day the wound was dressed and looked well. Patient had had a good deal of pain during the night.

Sept 30th Progressing favorably - Temperature normal. Pain not quite so great.

The man made an excellent recovery, and is going about the town with a good useful

stump. He has had a hand made & fitted to it, with a fork to get his dinner with. A Hook has also been made for him. He can bend the stump at the wrist but of course he has no power of grasping. Patient was a Cab driver & is about to try & resume his employment. Since his recovery he tried carting, but found he could not use the shovel without a good deal of pain in the stump.

Disease of Metatarso-phalangeal Joint of big toe.

Case XVII Miss C. Aged 21 years came under my care a few months ago suffering from great pain in the metatarso-phalangeal joint of big toe, in fact not only of the joint, but in the bone itself.

History. Eleven years ago when a child she was hit on the big toe with a small wooden ball. The pain caused some degree of

faintness at the time, but was more severe on the second day. The toe was fomented with hot water, and rubbed with Hartshorn & oil. Some swelling occured on the side of the joint, but after a time went away. For a few years after the patient says she did not tread firmly on her foot, and she had some pain in it if she had a little extra standing or walking to do. She went to a doctor who thought it nothing serious and told her to go on as she was doing. It was then much better for two or three years. In Feby 1880, patient felt a burning heat in in toe, which she said changed colour, and at times felt quite dead, this would last perhaps for a day & then go off. The dead feeling in it would wake her up in the night time, and this she felt more than pain.

On examination, there was some swelling of the

joint, and great pain on pressure, especially if the end of the toe was sharply pressed upon, causing the articular surfaces of the joint to come together. Sometimes there was quite a blue mottling of the toe, as if there was defective circulation. The pain at times was very severe and the girl was getting miserable. Blisters were applied over the joint, and it was painted with Tinct Iodine for some time, but this did not seem to give any relief. Strapping with strong Mercury ointment was then tried for a time but no treatment appeared to do any good. We then advised leaving it alone for a time. A short time after this we heard the friends had gone to another doctor, but in about a couple of months she came back again to us asking that the toe might be amputated. (I forgot to mention that we had previously told her, that amputation might be required). On March 8th 1881. I amputated the toe by the usual

incision. There was nothing particular about the operation, and no vessels required ligaturing. On examination of the parts after removal of the toe we found slight ulceration of cartilage of 1st phalanx, but not nearly to the extent we had expected. The cartilage covering the metatarsal bone appeared quite glistening & healthy. We were surprised at this for we had thought the head of the bone was diseased, and I had prolonged my incision on the dorsum of the foot, to remove that bone if necessary, but seeing the state of parts of course this was not done. The wound healed well except at the extremity where we had inserted a drainage tube. The girl has still a good deal of pain in the foot, but can walk about with the aid of a stick, and I trust in a few months she will be able to go about as usual

The most striking point in the case to me

is the great pain the girl suffered for a year, and the very small amount of disease found. I must confess I was most surprised, for the girl for weeks before, had entirely lost the use of the toe, and I was prepared to find considerable ulceration of the joint. I might mention that though the girl seems of a weakly constitution, yet no organic disease of any organs in the body could be found.

Cancer of breast. Excision April 13th 1881

Case XVIII Mrs C. Aged 60 years.

History. Patient has complained of pain in the right breast for a year or two, and was treated with relief to the symptom, but she never noticed any lump in her breast until about 5 months ago, when she had another attack of pain. The pain was of a burning character usually, but sometimes sharp, and was often referred to the abdomen, which caused her not to think very much about her breast. Seeing that the lump did not go away, and that the nipple was being drawn in, she became anxious about herself, and came seeking advice.

On examination, a small hard tumor was found situated in the left mamma, just beneath the nipple, which had become retracted below the level of the surrounding skin. The size of the lump would be about that of a walnut; it was movable, but still not

completely so. It was not particularly painful on touch. Patient who was a weakly nervous woman, with a allow complexion, appeared very anxious about it. She was advised to have it removed at once, as it appeared to be localised, and no enlarged lymphatic glands could be found in the Axilla.
Her sister she said died of Cancer of some of the internal organs.
Patient went home to think out her case and in about two weeks decided upon the operation.
On April 13th 1881, I proceeded to remove the breast, Dr Lacey kindly administering a mixture of Chloroform and Ether. (equal parts).
Patient had a weak pulse, but no cardiac lesion was detected by the stethescope.
I made an incision obliquely from above downwards and outwards, including in the part to be removed, the nipple and a

considerable portion of surrounding skin - for about 5 inches. The tumor with a large amount of fat which adhered to it, was then dissected out, when it was found that there were some adhesions to the fascia covering the pectoral muscle, these were divided, and the muscle laid bare at the bottom of the wound. There was some failure of the heart's action during the operation which caused us a good deal of anxiety, but this was recovered by the end of the operation. Carbolic solution 1 to 20 in water, was then freely applied to the divided tissues, and a few bleeding points ligatured. There was very little haemorrhage during the operation. A drainage tube was inserted in the wound, and three deep silver wire sutures were introduced at intervals to draw the edges together. The margins of the wound were brought together by sutures of fine gut, so as if possible to get

union by first intention, although there was some little tension of parts.

After the operation the patient quickly recovered from the effects of the chloroform, but was very weak and feeble, and directly I had left the house began to vomit, Ice was ordered to be freely given, but the vomiting continued the whole of the night, and brought the woman in a very prostrate condition, there was some oozing from the wound, partly accounted for by the straining caused by the vomiting. Great pain was complained of all around the chest and especially in the back. An effervescent mixture was given as also opium suppositories but no sleep was obtained during the night

Apl 14. Today at visit, patient still complained of great pain, the wound was now dressed & the bandages which had been rather tightly applied to restrain any bleeding that might occur, were removed. There was seen to be a

good deal of tension owing to the deep wire sutures, the tissues of the breast also appeared dark as if much bruised. There was also some extravasation of blood on the left side over the last ribs, and also over the left shoulder and yet these positions had been exposed and not bandaged; the appearence was exactly that of an extensive bruise, how to account for this I dont know, for there was no pressure applied, and I can only put it down to the weak condition of the patient and consequent poorness of her blood.
The wire sutures were at once cut & removed when the tension appeared to be relieved, and the wound at its lower part opened up a little, it was decided to leave it thus to granulate up gradually, for it was feared that owing to the weak state of the patient, and the low vitality of the tissues, that there would be some sloughing

of the edges of the wound if they were kept in close apposition. Temperature was normal 98°7. At the evening visit, patient expressed herself as much easier, and had had very little pain during the day, except in her back, the sickness also had stayed, but it had left her very low.

Apl 15. Patient still a little better; the wound also has a better look, its upper part appears to be uniting by primary union.

Apl 16th, 17th, 18th Still improvement though gradual.

19th Feels much better today, and enjoys her food; is not so much fatigued by the dressing of the wound, which is done every other day. Has no pain, but is tired of lying on her back. The catgut stitches have disappeared, and the wound for a short distance at its upper end healed.

Apl 22. Patient gradually gaining strength, and sat up in bed for about an hour, today for

the first time. The wound is slowly healing and the discharge diminishing.
Temperature normal. It will be seen by the chart below, that it rose 1 degree, but gradually went down again.

Axillary Temperatures of Mrs C. (Cancer of breast.

Apl	14.	98°.
	15	98·4
	16	99.
	17	99·6
	18	99·1
	19	99·4
	20	99·3
	21	98·9
	22	98·8

The tumor on examination after its removal proved to be a Scirrhus Cancer – Had a firm hard feel, and on section was white and glistening; it appeared to be sending branchings into the surrounding tissues in the form of white bands. It was small but evidently spreading, and the operation was performed none too soon.

Lumbar Abscess. Incision Sept 30th 1881

Case XIX Alice C. Aged 3 months.

History. The little baby appeared quite healthy at its birth, and grew well, but when exactly two months old began to cry a good deal, and without any apparent cause, this continued for a month until the present time, irrespective of feeding or nursing. The mother could not understand why it should cry, and never noticed anything the matter until the child was three months old, when she found a swelling on the left side of the back, and at once sought advice.

On examination a large deep seated swelling was found situated in the left lumbar region; the question then arose, was it an abscess or a tumor? and I declined to give an opinion which of two, until it had been watched for some time. Hot poultices and fomentations were ordered. The swelling

gradually increased, and came nearer the surface, but there was no redness: the surface had a few veins coursing over it, and enlarged veins were seen in the thigh, which now began to swell and as the tumor increased so did the size of the leg, due to disturbed circulation from pressure of the mass in the abdomen. The swelling was now as large as the back of the childs head as the mother said, and it was decided to open it. This I did on Sept 30th 1880, and the pus gushed out, there would be a good pint of yellow pus. The incision was carefully covered with Carbolic oil and lint, and the pus allowed to escape beneath it. After the operation the child appeared rather weak, and was very sick for two days. The discharge gradually lessened. There was some prominence over one of the lumbar vertebræ and pain on pressure. From this time

the child made an uninterrupted recovery
ate and slept well. Cod liver oil and
Syrup Ferri Phosp Co. were also given.
The swelling in the thigh and leg quickly
went down, the discharge became much
less, and the wound quickly healed.
Apl 21st 1881. I saw the child today, six
months after, and found it grown very
much and looking very well. The scar
could still be seen on the back, but
no prominence of the spine was felt
and no pain elicited on pressure.
I had ordered the parents not to allow
the child to sit up, and this they
still carried out as far as possible, but
the baby sometimes sat up in bed.
Cod liver oil is still taken.
This case was of great interest owing to
the extreme youth of the patient, and the
most complete recovery.