

THE SURGICAL DISEASES OF CHILDREN.

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I. The operative treatment of cleft palate.

In the course of 1898 Mr. Arbuthnot Lane published a volume* of 278 pages, containing a certain number of clinical lectures which he had given, first among them being one on "Cleft Palate." In it he somewhat severely criticised the remarks of a recent writer upon the subject of cleft palate, especially the statement that the closure of the cleft in no way remedies the defective articulation. "No, gentlemen," says Mr. Lane (p. 14), "the treatment of cleft palate, like the greater part of surgery, has been a matter of creed and tradition, and has not been arrived at in any reasonable manner."

He says that he finds the best age for operative interference is during the fifth week, provided that the infant is in good health. He deals with the cleft in a hard palate by a modification of Davies-Colley's flap operation. With regard to the hinder part of the cleft he splits the sides of the soft palate and, turning over the flaps, adjusts them by sutures without removing any of the tissue. He says that it is very unusual for any portion of the flap-covering in the cleft in the hard palate to give way. The sutures used are of the finest silk. Mr. Lane writes that when he is operating on a palate and "there is no cleft in the lip and the narrow orifice is a difficulty, I do not hesitate to split the lip, restoring its continuity accurately after the operation on the palate has been completed." One would have thought that a surgeon who is in the habit of operating on the palates of five-weeks-old babies would generally be able to find sufficient elbow-room in the mouth of an older child without having to resort to splitting a sound lip. However neatly Mr. Lane eventually may mend the lip which he has, in my humble opinion, somewhat needlessly split, there will always be a scar marking the situation of his cut. Perhaps, after all, however, he does not resort to this measure so often as his statement might seem to suggest. I should not envy the position of

* *Clinical Journal Office*, 22½, Bartholomew Close, E.C.

a surgeon who, having split the perfect lip of a child with cleft palate for his convenience in operating, failed to remedy the defect in the roof of the mouth! *Primum est non nocere.*

On page 23 he says: "I do not pretend to obtain the same results in the treatment of hare-lip as are apparently got by some surgeons, if one can place any reliance whatever upon the diagrams they use to illustrate their methods of procedure. These, I fancy, are purely imaginary, since they appear to be able to restore the imperfectly developed lip to its normal form, and to its relationship to the lower lip."

The perusal of this modest and suggestive expression makes me feel a little uncomfortable, for I remember that a few years ago I myself published some diagrams upon hare-lip operations.

Mr. Lane's writings are invariably straight to the point and interesting, and if they do not always carry conviction to an old-fashioned surgeon, at least they arrest his attention and offer him material over which he may do well to ponder.

Sir Thomas Fitzgerald, of Melbourne, in a lecture which was recently published in the "Hermes Med. Supplement" (lxxxiii.), whilst speaking of the closure of clefts in the hard palate, remarked that he had sometimes employed a method of Fergusson's which consisted in chiselling the bones of the palate, and levering the parts together. From experience, he believed it to be the proper operation for a really bad cleft palate. It has the advantage that cicatrization takes place laterally, and so the soft palate is not drawn forward, and caused to be contracted antero-posteriorly. He believed that speech is better under this plan of treatment than under the muco-periosteal operation. Within the last month he had operated upon the daughter of a distinguished lawyer, where the cleft in the hard palate was too wide even for the muco-periosteal operation, and had adopted the old treatment of chiselling the bone forming the palate on either side, making four distinct wedge-shaped holes with a chisel three-eighths of an inch wide on either side of the cleft, and crushing the bones together. Afterwards he passed a strong wire through the chiselled holes from side to side, and drew the parts into perfect apposition. The case did well, and speech is good; in fact, with little or no nasal intonation. Sir Thomas's opinion is that this will be the operation of the future.

Clutton (*St. Thomas's Hospital Reports*, vol. xxv.) has recently published a full account of his operations on cleft palate. He says: "If the edges can be brought together by free lateral incisions, age alone would be no bar to operation. It is now rare for the edges to break away unless diphtheria or scarlet fever

should accidentally be contracted. This is in part due to the nature of the material used for suturing, as no one should now use silk in the mouth if it is to be retained long enough for sound union of the edges. However aseptic it may be to start with, it cannot long remain so.

"I have said nothing as to an operation in two stages, namely, the first to close the soft palate, and the second at a later date to complete the operation by the closure of the hard. I have never done it, and see no particular advantage in thus subdividing the operation. If the child or baby is strong enough for the complete operation, it is far easier to obtain success by closing the whole cleft at once. If the child is not in good condition, it is better in my opinion to postpone the operation altogether to a later period."

As regards the age for operations, Mr. Clutton says: "I believe that a very large proportion of the worst cases of cleft palate can be safely operated on before the second year is completed. The only reason that has prevented me from carrying out my own views is simply that the cases have not been brought to the hospital till the children were much older.

"It is, however, of great importance to do the operation at the earliest possible time for another reason. Milk and other fluids are liable to return by the nose. A baby has on this account to be fed very slowly, and consequently is often insufficiently nourished."

As regards the improvement of the voice after the operation, Mr. Clutton truly says that where the operation has been done before the second year has passed, it will often be found that the voice is quite natural, and is not to be recognised as one with the peculiar intonation belonging to a deficient palate. When the child is five years of age he or she has already learnt to talk for a comparatively long period, and it is sometimes quite distressing to notice what little improvement has been accomplished by the operation. The improvement that is then to be obtained rests too largely with the parents and friends. If they do not take an infinity of trouble, the child at this age of irresponsibility will appear sometimes scarcely to improve at all after the first few months, and it would appear as if one might as well have operated at ten years or even later.

A clinical lecture upon cleft palate by Edmund Owen was published in the *Lancet* of Jan. 29, 1898.

Upon the important question of the best age for operating he wrote:—"If the cleft be confined to the soft palate and the infant is in a satisfactory state of health the operation may be done

within a few months of birth. But if the hard palate be also implicated I am at present inclined to wait at least another year lest the infant should receive a fatal shock from the necessarily severe operation. I am not sure that it is necessary thus to wait before attempting to close the entire cleft, but I am at present inclined to think the delay expedient and if the cleft is a wide one I am convinced that it is discreet. The tissues at this early date are little more than protoplasmic and the infant's power to resist shock must be extremely feeble. I am not satisfied that the risks of the operation in these circumstances are outweighed by the gain of the early closure.

"However wide a cleft of the hard and soft palate may be I prefer to operate upon the entire cleft at once rather than divide the operation into two parts, one for the hard palate, and one for the soft. Indeed, it is necessary freely to detach the mucoperiosteum of the back of the hard palate before one is able to bring the edges of the adjoining part of the soft palate into apposition, and similarly the hinder part of the cleft in the hard palate cannot be closed without loosening the anterior part of the soft palate. Thus in either instance going a step further and dealing with the remaining part of the cleft adds so little to the time expended over the operation, and to the shock inflicted upon the patient, that in every case it is worth trying for. Nothing succeeds like success, and in a large proportion of cases both parts of the cleft when thus dealt with are entirely and permanently closed at the one operation."

I have tried the gag recommended by Mr. Lane, and depicted in his "Clinical Lectures," but I cannot get on with it, and, moreover, it is destitute of a tongue plate.

A perfect gag has yet to be invented. I have tried almost every gag in the market and I find that I get on best with one which is called after its ingenious inventor, "Smith's gag." A disadvantage in connection with it is that it is sometimes very difficult to keep it in place, the plates slipping forward from their bearings on the teeth and worrying the surgeon in perhaps the most important stage of the operation. But when the child has lost many of its teeth, this gag is quite useless. I have, therefore, modified Smith's gag by replacing the usual plates by bars which carry minute spikes which can slip into the interdental crevices, or into the toothless gums, and there take a firm hold. Messrs. Weiss make these modified gags (Fig. 1.).

One of the most important points towards securing union is to leave the flaps perfectly free from tension; this is done by continuing the incision which has already been made near the alveolar

process backwards through the substance of the soft palate, as shown in the dotted line in Fig 2.

Mr. R. W. Murray published a short paper upon hare-lip and cleft palate in the *Liverpool Med. and Chir. Journ.* of Jan., 1898.

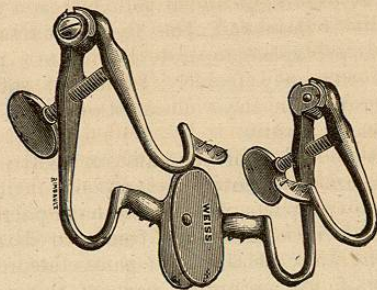


Fig. 1.—Modified "Smith's gag."

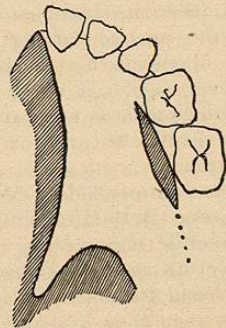


Fig 2.—Cleft of hard and soft palate (left side) showing line of incision along alveolar process, with dotted line in which incision may have to be freely extended.

He said that in all surgical text-books, and in most of the works dealing especially with this subject, the age at which it was advised that the palate should be operated upon was somewhere between the third and sixth year. This, he was convinced, was a mistake; for after all, the chief object in closing a cleft palate, more especially when this is the only deformity, was to render the powers of speech more perfect than they otherwise would be. If the operation were delayed until the third year or later, the child by that time had learned to talk, and necessarily

to talk badly: a habit which once acquired was very difficult to overcome completely. The point he wished especially to emphasise was that *the palate should be closed before the child had learned to talk at all*. This being the case and other things being equal, the sooner the cleft was closed the better, and he had on several occasions operated upon children during the first few months of life, but he had come to the conclusion that, as a rule, it is not advisable to operate so early.

"When performed at this early age the operation is a difficult one, owing to the small space one has to work in: the tissues are extremely friable, and require to be handled with the greatest care; besides which, the halves of the uvula are then so small that, after paring their edges, there is hardly sufficient tissue left to form a uvula with. During the last four years I have delayed operating until the child is about twelve months old, and I show this evening several children whose palates were closed during infancy, and who now talk quite naturally, it being impossible to detect from their speech that they ever had cleft palates. In these particular cases the cleft of the palate was not associated with a hare-lip. When the deformity includes both the lip and the palate, I operate upon the lip about the fourth week, close the soft palate at the end of the first year, and subsequently close the hard palate. In this class of case the result of operation, as regards the powers of articulation, is necessarily not so satisfactory as when the palate only is cleft, but, as you have seen in several cases shown you, the defect in speech is not very noticeable."

I quote with full approval Mr. Murray's remarks; it seems to me that he has hit off exactly the time at which, all things being suitable, the operation on the lip and on the palate should be respectively performed. But, as I have already remarked, I am not an advocate for dividing the operation upon the palate into two stages.

2. The forcible reduction of Pott's curvature.

Mons. P. Redard has issued in a brochure* the paper which he read at Moscow upon the treatment instituted by Dr. Calot. His opinion is that the method is rational, and that it can be advantageously adopted in certain cases, but on condition that it is carried out prudently "*et sans danger d'accidents primitifs ou consécutifs sérieux.*" Yes; but however "prudently" the treatment is carried out there must inevitably be a danger of immediate accident and of secondary complications. The question at once arises, Is it prudent to subject the child to the inevitable risks, immediate and remote? I am by no means going to answer this

* Paris, Carré et Cie, 3, Rue Racine.

question affirmatively, but when upon the question of "risks" I cannot hide from myself the fact that every operation which the surgeon undertakes for a deformed or helpless child contains some element of risk. The nearest parallel to Calot's operation is, perhaps, the resection of an old tuberculous hip with threefold displacement of the thigh. I suppose that no surgeon likes the operation; but we all have to practise it. After it the child may die from shock or, more remotely, from general dissemination of the infective tuberculous material, from bed-sores, or exhaustion.

So far as I can judge by studying what is written in the operation—if the cases are fairly reported—the risks in and after Calot's operation, are certainly not so great as those in connection with the operation of resection of the head of the femur in old articular disease. That this comparison is not a good one, I am fully aware, but I fail to discover a better. The comparison breaks down in this, that the *redressement forcé* of a gibbous spine is not an open operation, and will not, therefore, lead to any risk of septic contamination.

I am not for a moment arguing that the new operation marks a real advance in surgery, but I wish to be fair towards it. Redard himself says (p. 5) that some cases of Pott's curvature can be modified only by submitting the patients to the greatest dangers. And he would have it that the forcible straightening should be reserved for those cases in which, under an anæsthetic, the projection can be found to yield to a moderate force. He says that slight curvatures of recent origin and of limited osseous area can be easily and entirely reduced by a force *très modérée*, without doing any local damage. So also in the case of young or feeble children. He will not attempt to give a time limit beyond which it is inexpedient to employ the force, but he evidently considers that time—which generally means consolidation—has a very important bearing in the question of operating. "L'extension du rachis par traction au niveau de l'extrémité céphalique et des membres inférieurs, une légère pression directe sur la bosse, pendant que le sujet est profondément endormi par le chloroforme, donnent seules des renseignements nets et précis."

As Redard says, the vigorous treatment of curvatures in the cervical, and especially in the upper cervical region, would be very liable to accidents. Indeed, one shudders to think of them, and it will be noticed that in the various photographic representations which have found their way not only into the medical, but also into the lay press, the boss which is being dealt with is always in the dorsal or lumbar region. I could hardly imagine either of my

friends Calot or Redard posing to a disciple of Daguerre whilst attacking or even examining a cervical boss.

The presence of extensive cold abscess, and the existence of constitutional or organic disease are, according to Redard, to be regarded as contra-indications to operation, but the existence of paraplegia is to be taken as a clear indication for it.

In about 20 per cent. of the cases operated on, the pressure caused a superficial slough over the projecting spines—but had the force been exerted by the palms of the hands rather than by the lever, which is shown in the illustration in Redard's brochure, I think that even this accident could have been avoided. Redard says that he has seen no other complication following his operations, but that in every case the (peripheral) pains disappeared and the general health improved, and he attributes these happy results to the care which he exercised in choosing his cases.

When the operation was first introduced to England from France I confess that I viewed it with alarm. I was afraid lest a catalogue of accidents of varying degrees of gravity should attend its adoption. But so far as I can make out, this fear, if not groundless, has been proved to be greatly overrated. I am sure that there are many British and foreign surgeons who, like myself, have hitherto never had a good word to say for Calot's procedure, but I think that we must be prepared to admit that there are cases in which it may be resorted to, and it appears to me that Redard has very judiciously pointed out the class of cases in which it may be tried.

It is hardly necessary to say that the forcible straightening of the back is in no sense a *curative* operation, and that when it has been performed the surgeon has to recommence the patient treatment which ensures complete rest for the ulcerated bones. But he takes the fresh start in that direction with the back straight instead of excurved. And I should think that it would be necessary to keep the child longer in the horizontal position than it would have been had the straightening out of the carious angle not been resorted to.

R. W. Murray, F.R.C.S. (Liverpool), in publishing some cases in which he straightened a carious spine (*Brit. Med. Journ.*, p. 1630, Dec. 4, 1897) says:—"I feel sure that some permanent advance in the treatment of spine disease will be the outcome of the revival of interest in this branch of surgery. That it will not be such a great advance as some surgeons would have us believe I think there can be little doubt; but I sincerely hope it will be a greater advance than some of us expect."

The moral which I would prefer to point from these remarks

upon the treatment of the gibbosity of the spine in Pott's disease, is that the practitioner should take so much patient care over the conduct of the case, from the very beginning of the disease, that no deformity should ensue. There is no reason why caries of the spine should be followed by obvious deformity.

If one has entire charge of a case of tuberculous disease of a hip- or knee-joint from the beginning, one takes great care that neither by the weight of the body, by the contact of the foot with the ground, nor by the energetic spasm or watchful contraction of apprehensive muscles, should the limb become deflected. He makes it his business that the child gets well with the thigh neither flexed nor adducted, though some inevitable shortening may have to be recorded. And so also with tuberculous disease of the knee, if the child is treated with the promptitude and energy which the case deserves there should be no displacement whatever of the head of the tibia.

But the child with early disease of the spine is too often allowed to go about as he pleases. The obscure peripheral neuralgias over the front of the trunk, or down the limbs, are not understood; the stiffness, the stumblings, the aches and the pains are disregarded or misinterpreted, and the disease is permitted to drift on, the disintegration of the bodies of the vertebræ increasing until deformity presents itself. Would it be believed that practitioners have been heard of who, in an obscure case, have declined to admit the existence of Pott's disease until an angular projection had occurred? To them, "angular curvature" of the spine, as they called it, and Pott's disease were interchangeable terms. I am willing to allow the term "angular curvature" to pass, though I fail to see how a thing which is "curved" can also be "angular," the two words being contradictory of each other. But I will insist on this—it is the moral which I wish to point—that if Pott's disease is promptly recognised and efficiently treated there should be no angular projection for Calot, Redard, or me, perchance, to deal with.

Reference may be made with advantage to Dr. Calot's remarks at the Clinical Society of London, as recorded in the *Brit. Med. Journ.* of Nov. 20, 1897, p. 1501. In the course of these remarks, Calot assured the meeting that the difficulty and the dangers of the correction were not greater in the spinal disease than in the disease of the other joints; that many hundreds of the operations on the spine had now been done for eight months in many parts of the world by a large number of surgeons, and had shown that the mortality after operation or the danger of paralysis did not probably exceed 1 per cent. His first series of thirty-seven

cases thus treated did not comprise a single instance of untoward result following the operation.

At a meeting of the American Orthopædic Association which was held at Boston in May, 1898, Dr. Frank E. Peckham argued against the adoption of the forcible reduction of the deformity when there was firm ankylosis, but he affirmed that in those cases in which paraplegia was present the operation should be urged with the greatest confidence.

My opinion of the value of laminectomy, the operation which was introduced some years ago as appropriate in the case of paraplegia following Pott's disease, is so unfavourable that if any operative procedure seemed to be urgently demanded in a paraplegic case I should now certainly try the effect of forcible extension of the spine.

3. The sclerogenic method of Prof. Lannelongue.

(*Archives générales de Médecine*, April, 1898.)

Dr. Paul Coudray remarks that he has on various occasions called attention to the results of treatment by the method of the injection of solutions of chloride of zinc in tuberculous articular disease. He places these cases in three classes: (1) Where no suppuration has occurred; (2) where, though suppuration has occurred, the joint is still closed; and (3) where the abscess is discharging. He bases his observations upon a series of upwards of a hundred cases, calling particular attention to a patient who had general tuberculous disease of the tarsus, with discharging sinuses. So unpromising did the case look that an experienced surgeon had already condemned the foot for amputation. The unhealthy granulation-tissue was scraped out from various situations, and the solution of zinc chloride was applied. The foot was saved, and it has since become strong and vigorous.

A little girl was seen in March, 1892, in a very bad state of health with a breaking-down, tuberculous knee. The child had come from a hospital, where amputation had been formally advised. On April 12, 1892, twelve injections of a 10 per cent. solution of zinc chloride (35 drops) were made, and a week later the joint was laid open as for a resection, the scissors and sharp spoon being freely used. The child recovered with a synostosed knee in a slightly flexed position. She walks excellently, "without lameness" (*pour ainsi dire*)—which is as satisfactory as this is unusual for a child with a stiff knee.

[I like the expression "*pour ainsi dire*," and intend to adopt it when recording my successful cases—other cases not being deserving of record. The expression gives a picturesqueness to an otherwise dull report; it rounds it off and effaces blank spaces. I never met with it in Euclid.]

Observation xxviii.—A child of seven years with old-standing white swelling of the knee, which was bent almost to a right angle. "Straightening under chloroform obtained with great difficulty; a month later, seven injections of the solutions were practised—1 grm." Which means, I apprehend, that about 15 gr. weight of the 10 per cent. solution in all were used for the seven injections. That is, about two drops for each injection. A month later the joint was opened and scraped. The child recovered with a stiff knee.

Reading this and others of the observations, one fails to see how the progress of the case was influenced by the injections; Coudray, however, is of opinion that they guide and render more precise the (subsequent) intervention. He says (p. 423) that the method greatly simplifies the process of curettage, and, moreover, renders the living tissues extremely active, producing in them fibrous and osseous changes which successfully oppose further infection. He is authorised by Lannelongue to affirm that the improvement thus produced is definite and permanent, recurrence of the disease being practically unknown.

In a girl of 16 (*obs. ii.*), with a tuberculous knee of nine years' standing, he employed on one occasion nine injections of three drops of the 10 per cent. solution, and, as some pain persisted, he gave two more injections at the end of a fortnight. This child did apparently well, and after six years had had no return of her trouble. Thus, if the injection does not always check the formation of a tuberculous abscess, it appears to render its influence comparatively local and harmless.

Many similar cases are given, ten or a dozen injections of two or three drops each being made at a time. In some of these cases small abscesses formed, which apparently did well under incision and scraping. It would appear that under the influence of the injections the fungous granulation-tissue steadily shrinks, probably being converted into a fibrous structure, though, in some cases, resection has ultimately to be resorted to.

There is this one feature about Lannelongue's sclerogenic treatment, that the surgeon resorts to it in cases in which he might otherwise be induced to advise a resection, and thus, if the disease is kept in check the child is afforded an extra opportunity of triumphing over it.

As regards the amount of zinc chloride introduced, it will be seen that in the case of a girl of eleven years (*obs. xxii.*), whose left knee was considerably enlarged by fungous granulations, nearly 40 gr. were used in ten injections on the one occasion. (A few weeks later this child fell a victim to tuberculous meningitis.)

In the next case reported (*obs. xxviii.*), double that amount was used for a tuberculous knee in a girl of ten years. (This child died of enteric fever some months later.)

Dr. Coudray does not strongly recommend the method in disease of the hip-joint, as the tuberculous tissue is too deeply situated to be attacked with precision and certainty. Nor has he found it of marked service in the treatment of glands enlarged by tuberculous inflammation, because, he says, it is difficult to *circumscribe* the deposits sufficiently; for he injects the solution (20 per cent.) into the superficial part of the gland and into the surrounding tissue—not into the mass of the gland.

The conclusions arrived at are that the sclerogenic method is specially indicated in early tuberculosis of the knee, and that the series of injections are best made on a single occasion. Like Lannelongue, Coudray is gradually increasing the amount employed, and he is now using, for a knee, for instance, ten or twelve injections of four or five drops each of a 10 per cent. solution in a child of eight or ten years.

For my own part I think that the method is worthy of more attention than it has yet received in Great Britain. I have from time to time employed it, but I confess, in a somewhat half-hearted manner, expecting, perhaps, too much from it.

At any rate it may be employed without incurring risk, as it appears, and it may prove useful in that large class of cases of "white knee" in children in which the surgeon feels that something ought to be done, whilst he recoils from the resort to an erosion or resection.

The subject of zinc chloride injections in tuberculous osteoarthritis came under discussion before the *Société de Chirurgie de Paris*, on Feb. 9, 1898, on the case of an adult who had been under the treatment of Dr. Gérard Marchant. It seemed to have been a hopeless case of tuberculous disease of the tarsus with discharging sinuses. The injections had been made every week for eight months. In the course of some remarks Lucas-Championnière said that it was impossible to compare success of the treatment in adults with that obtained in children.

4. Myeloid sarcoma.

Myeloid sarcoma of the femur treated by scraping, by Frank Hinds, M.D., Hon. Medical Officer to the Worthing Infirmary (*Brit. Med. Journ.*, Feb. 26, 1898, p. 555). Although the case recorded was that of a man of thirty-four years, it has, nevertheless, a very important bearing on the surgery of childhood, where central sarcomas are so frequently met with.

The case was that of a healthy-looking man with a swelling at the lower end of the femur, which, at the time of the operation, was thought to be probably a central necrosis. But as soon as the incision was carried down to the bone, its thin expanded condition and the bluish colour of the subjacent structure showed the nature of the disease. A piece of bone about the size of a crown piece was removed with scissors, and the growth, which was dark red and firm, scraped out, leaving a cavity in both condyles, extending upwards into the shaft, and measuring 4 in. in depth from the opening in the internal tuberosity to its outer side. The interior was scrubbed with chloride of zinc solution (gr. xx ad ʒj), and packed with gauze.

At the end of six weeks, the appearance of the granulations not being satisfactory, the cavity was again scraped out and scrubbed with zinc chloride solution; no definite masses of growth were recognised at this operation.

Convalescence was uninterrupted; the leg was kept in a Thomas's knee splint for nine months, and afterwards a leather splint was worn for a further period of nine months.

At the beginning of February, 1898, the man's health was perfect, and there were no signs of growth to be detected anywhere. The knee had only a very slight degree of flexion; there was no pain in it; the patient used it practically as a stiff leg. There was a sinus about 1 in. deep on the inner side, which discharged enough pus just to soil a dressing in twenty-four hours. Under the microscope the growth was seen to be a myeloid sarcoma with numerous giant cells.

There has been no sign of any recurrence after four years from the date when the earliest symptoms were noted, and two and a half years from operation. The advantage of removing the growth by scraping instead of by amputation of the limb is obvious, and the earlier it is resorted to the better the prospect will be of saving the bone in a condition in which repair may take place to such an extent as to result in a useful limb. The very thin condition of the bone was the reason for keeping the knee free from weight for so long a period.

Certainly the case is very instructive, and it will be welcomed by those surgeons who argue for a less serious operation than amputation in central sarcoma of the lower end of the femur. Myeloid sarcoma is the least malignant form of malignant disease, and some pathologists go so far as to affirm that it ought not to be classified amongst the malignant diseases at all. At any rate it differs in every respect, clinically and pathologically, from a periosteal sarcoma; and if a child with a central sarcoma can be

kept under constant observation for some years, the surgeon may do well to follow the course adopted with, apparently, so great success by Dr. Hinds.

Myeloid sarcoma of the upper end of the tibia treated by scraping.

Charles A. Morton, F.R.C.S., Prof. of Surgery in University College, Bristol (*Brit. Med. Journ.*, July 23, 1898). Now that with increasing clinical experience and greater pathological knowledge, central sarcoma has been clearly differentiated from periosteal, its comparative harmlessness has become more generally admitted. Previously it was the invariable custom to amputate a limb for a myeloid sarcoma, but of late the operating surgeon has become much less heroic in his treatment, and, as these reports show, he now makes it his first business to try to save the limb.

In the important matter of the treatment of a sarcomatous bone, everything turns, of course, upon the histology of the growth. And though the comparatively harmless endosteal tumour usually attacks the end of the diaphysis, this is by no means always the case, for sometimes a periosteal sarcoma attacks the neighbourhood of the joint. Unfortunately, too, a sarcoma which is not of the myeloid variety sometimes, though very rarely, attacks the interior of a bone. "If," says Prof. Morton, "on examination of the growth after removal it was found not to be myeloid, the patient should be very carefully watched, and amputation performed at the earliest sign of local recurrence." It is apparently a fact that if a myeloid sarcoma has not perforated its capsule it may be safely removed without fear of recurrence: it does not disseminate; and Sutton has suggested that a central sarcoma should no longer be called a myeloid sarcoma, but a myeloma. Clutton also considers that they so seldom return after removal that they may almost be looked upon as benign growths. Henry Morris has recorded a case of resection of the lower end of the radius for myeloid sarcoma, and the patient was perfectly well thirteen years later, and Lucas one of resection of the lower end of the ulna for the same form of growth, and the patient was also well ten years after operation. A patient of Mr. Sutton's, from whom a myeloid sarcoma of the sternal end of the clavicle had been excised, was shown at the Clinical Society free from recurrence nearly four years later.

Excision of the affected portion of bone has now been accepted by most surgeons as the recognised method of treating such cases if the removal of bone can be carried out so as to leave a useful limb. But Morton could find no record of a case in which this has been successfully done in the femur or tibia, though it has in

the upper end of the humerus. "I have now excised the upper end of the tibia for myeloid sarcoma in two cases. In the case first operated on the patient has a most useful limb, and in the other is beginning to walk without support. In the first case I determined to try to save the limb, but the patient consented to amputation if I thought, during the operation, that it would be the best method of dealing with the disease. In the second the patient absolutely refused amputation under any circumstances. It seemed to me that the shortening could easily be made up for by a high-soled boot, but what I feared was after removal of so large an area of bone, when I approximated the tibia to the femur, the tissues in the popliteal space, instead of retracting to a sufficient extent, might kink, and thus, by obstruction of the popliteal vessels, cause gangrene in the leg. That the operation can be performed without danger of kinking of the vessels is now evident, and that we may get perfect osseous union and a very useful limb is shown by my first case."

5. *Hæmarthrosis due to hæmophilia.*

A. Channing Pearce, M.B., B.S., Lond. (*Brit. Med. Journ.*, April 30, 1898, p. 1135). CASE I.—H. F., aged seven years, injured the left knee on August 29th, 1895; a week later the joint was tense and fluctuating, but not very tender. He was anæmic; his cheeks were covered with dilated capillaries. Pulse rapid and small; hæmic bruits were heard. Temperature 102°. An attempt at aspirating the joint was made under the impression that the condition was one of subacute synovitis, but was given up when nothing but treacly-looking blood oozed out. The high temperature persisted for ten days; the swelling of the knee gradually diminished. Six weeks later the joint was nearly normal, and movement was only slightly limited. His mother said that he has been liable to attacks of "rheumatism" ever since he was two years old; it had been observed that the network of capillaries on his cheeks became engorged before an attack. When he cuts himself, he is said to go on bleeding for a week.

He again came up on October 16th with troublesome oozing from the gum following removal of two fragments of his temporary incisors. His left elbow was said to have been knocked; the joint was distended and the skin discoloured; there was slight tenderness. A week later the other elbow was found in the same condition; this was not ascribed to any injury.

A month after this he was again admitted for an enormous hæmorrhage in the popliteal region extending down to the ankle. There was a history of injury. The boy was feverish and weak, but rapidly improved under treatment. When last seen, in

January, 1896, he was fairly well, but had a hæmarthrosis of the right elbow associated with a bruise over the inner condyle.

CASE II.—P. M., aged two years, had been admitted for what was thought to be a "pulpy swelling" of the right knee when ten months old. The notes recorded that the swelling extended half way up the thigh. About this time it was noticed that the slightest pressure, such as that of the fingers in lifting or that of the rail of his chair, caused bruising of the skin. There was no family history of hæmophilia.

In May, 1895, he was admitted with a wound of the mucous membrane between the upper lip and gum, which had bled continuously for twenty-four hours. The knee was well. In spite of plugging with gauze, local application, and internal administration of styptics, the bleeding continued for a week. The wound was then charred over with Paquelin's cautery till all oozing stopped; it healed without further trouble.

Four months later he was brought up with a slight effusion in the left knee, and a month later a large hæmatoma appeared on the right knee. In January, 1896, he had a hæmatoma extending from the umbilicus to flank. He was in a serious condition, but he made a rapid recovery.

The third case was a boy, 2-3 years, who "bruised readily." His maternal uncle had frequent epistaxis. In August, 1895, the boy came under treatment for bleeding into his ankle-joint.

It is well from time to time to be reminded of the existence of such a disease as hæmophilia, for the surgeon sees so few cases of it that when one comes before him he is apt to be off his guard, and, by adopting active treatment under a misapprehension, to invite disaster. So far as my experience goes, there is nothing in the aspect of a boy to show that he is a bleeder. It has been suggested that all such subjects should be tattooed upon the front of the chest with a conspicuous "B" to show that they are bleeders. But I should think that in later years the boy would be as anxious to hide that initial as was a young man whom I once had as an out-patient on whose chest a big "D" was branded!

The first of the cases here reported is just the sort of one to get a practitioner into difficulties—a boy is admitted with acute effusion into a knee. What more likely than that it should be a sero-synovial, blood-stained effusion, the result of an injury, and what treatment more suitable than that of tapping the joint and fixing the limb in plaster-of-Paris splints for a while? But what a calamity if the hæmorrhage continued, and if an oozing through the puncture caused the joint to become septic!