

century, or of Dr. Hall of the beginning of this one. Besides these, Manchester has produced Kinder Wood, Robertson, and Charles Clay. The obstetric work of Manchester that is best known, because it made great noise in its day, has reference to Cæsarean Section; and to the questions, still far from settled, regarding this operation, Radford naturally devoted attention. Indeed, his best known work is on Deformities of the Pelvis and Cæsarean Section, and of it a second edition appeared so late as 1880. Not the least part of his good life endeavour is to be read in a book which he neither wrote nor published, but which we owe to the zeal of our Fellow, Mr. Cullingworth. This book appeared in 1877, and is entitled Catalogue of the Radford Library, St. Mary's Hospital, Manchester, and it is a record of magnificent and enlightened generosity. "In the year 1853," says Mr. Cullingworth, "St. Mary's Hospital, Manchester, was enriched by the gift of a very valuable library and museum. They were named respectively 'Radford Library' and the 'Radford Museum,' so that the name of the munificent donor might be permanently associated with his gift. Both had been founded by Dr. Radford himself, and the many important additions since made to the library have all been presented by him. I have (he adds) Dr. Radford's permission to state that he has also placed an endowment fund of £1000 in the hands of trustees, and that the interest of this sum, which will become available at his death, will be devoted exclusively to the maintenance and extension of the library."

Otto Spiegelberg, an honorary Fellow of this Society, and deservedly one of the most famous of modern obstetricians, was born on January 9th, 1830, at Peine in Hanover. He died of contracted kidneys and heart disease at Breslau on August 9th, 1881, at the early age of fifty years: a deplorable event suddenly arresting in mid-career a life of very great activity and beneficence in both science and practice. Spiegelberg received a classical education at Hildesheim, and at the early age of eighteen entered the University of Göttingen. Here he already showed his inclination towards the pursuit of midwifery, and so attracted the regard and esteem of his teacher, E. C. J. von Siebold, that he took him with him to Vienna on a scientific expedition in 1852. On his return to Göttingen Spiegelberg set about the study and practice of midwifery with zeal destined never to wane. In 1855 he made a scientific journey to England, Scotland, and Ireland. I remember the bright-eyed, zealous youth, and his friend Breslau, diligently seeking all kinds of knowledge in Edinburgh when my highly prized acquaintance with him began, soon to ripen into a mutual friendship which lasted till his death. In 1860 he published a small text-book of midwifery, and in the same year he was made Extraordinary Professor of Midwifery in the University. In 1861 he was called to Freiburg as Professor Ordinarius, and there he married Fräulein Louise de Bary. After two years in Freiburg he went to Königsberg as Professor, but before he was well settled there he accepted the same office in Breslau in 1865. He thus held four professorships of midwifery successively; but this is not all, for he had the great honour of being invited in 1878 to the professor's chair in Strasbourg—a professorial character of remarkable variety. In 1870, co-operating with the well known and highly esteemed Professor Credé of Leipsic, he started the *Archiv für Gynäkologie*, and to it he contributed many valuable papers in midwifery, but especially in gynaecology, to which latter department he was specially devoted during the second half of his professional life. This great journal, conducted by Credé and Spiegelberg, has done very much honour to its conductors and contributors, being by far the best obstetrical periodical that has ever appeared; eminently distinguished for its high scientific character, successfully pushing obstetrics and gynaecology into that truly scientific position which it is our highest ambition as a society to promote. In this journal there appears a necrological account of Spiegelberg, to which I am indebted, and for which we have to thank Spiegelberg's warm and admiring friend, Leopold. The great, I may say the immortal, work of Spiegelberg is his *Lehrbuch*, which appeared in 1878, and of which the second edition is only partially published. In a letter I had from him a few days before his death, in which he discussed the prospect of his coming to the International Medical Congress, he mentioned that he was far advanced into the second half of his large work, and that he hoped soon to complete it. The first edition of this book is only nominally a second edition of the small *Lehrbuch* which he published in 1858

while still at Göttingen. The *Lehrbuch* of 1878 is about the largest system of Midwifery that has ever appeared. It is greatly to be lamented that he did not live to finish the new edition and to edit even still more. Only second to the best original work is the production of a first-rate *Lehrbuch*, and in this I believe we have an example of unsurpassed excellence. The two parts of the work which still await publication are, I believe, to be edited by Dr. Wiener, lately assistant to Spiegelberg.

Dr. James George Wilson was the son of a distinguished accoucheur of great experience and fame, who practised in Glasgow, and whom I remember as a venerable figure, highly respected in the profession. He is still memorable as taking an early and active part in the promotion of the treatment of labour complicated with contracted pelvis by delivery after podalic version, a mode of dealing with such cases which is still far from having the limits of its applicability thoroughly well defined, there being many differences of opinion regarding principles as well as important details. His son, James George, was born and bred in an obstetrical atmosphere, and grew into nothing else than an obstetrician. His mind was always occupied with this study, and his life filled with the practice. He enjoyed the confidence of his professional brethren and of a large circle of patients and friends. When the Chair of Midwifery in the University of Glasgow became vacant by the death of Dr. Pagan, many regarded Dr. Wilson as the best candidate for the office; but, as is well known, he was beaten by our respected fellow Professor Leishman. In 1863, however, he was elected to the Chair of Midwifery in Anderson's College. In 1855 he was appointed physician to the Glasgow Maternity Hospital; and in 1875 he became a consulting physician to the same institution; and it is interesting to notice that with this hospital he and his father had had official connexion since 1834—that is, for forty-seven years. This long stretch of time for experience yielded valuable fruit in the matured wisdom of both father and son. Dr. Wilson had overflowing enthusiasm in the study of midwifery as a science and as an art; but his contributions to medical literature were all of the kind called practical. They are mostly to be found in the pages of the *Glasgow Medical Journal* and of the *Medical Times and Gazette*. His fellow-townsman, Dr. W. L. Reid, has sent me a list of fourteen papers by him, and of these, the first, on a case of Aneurism, appeared in the *Glasgow Medical Journal* for 1855; and the last, being notes of Unusual Obstetric Cases, in the same journal for 1879. Dr. Wilson in the course of his life held several important obstetric offices, and was awarded several medical titles of distinction, not the least among which was that of Vice-President of this Society, an office to which he was promoted in 1865.

Gentlemen, it has been to me a great pleasure to preside over your meetings, and I have to acknowledge with gratitude your uniform courtesy. While reflecting with much satisfaction on our past year's work, let us strive to make that of the next surpass it.

SPLENOTOMY: A JUSTIFIABLE OPERATION IN LEUCOCYTHÆMIA (?).

By HERBERT COLLIER, L.R.C.P. LOND., M.R.C.S.

SOME twenty years ago extirpation of the spleen for diseased conditions of that organ was looked upon rather in the light of a surgical experiment than a recognised operation; and of the four cases which up to that date had been placed on record, the first two (*vide* appended Table) were discredited by the majority of writers on the subject, and the other two, which had both proved fatal, were looked upon as conclusive evidence of the hopelessness of the operation. The first case of splenotomy performed in this country was by Mr. Spencer Wells in 1865,¹ for simple hypertrophy, and the result of his operation was sufficiently encouraging to inspire not a few surgeons with the hope that at no distant date removal of the spleen would become as recognised and valuable an operation as ovariectomy was at that time. Mr. Spencer Wells' example was followed by Mr. Bryant in

¹ *Vide Medical Times and Gazette*, January 7th, 1866.

A TABLE SHOWING ALL THE PUBLISHED OPERATIONS FOR EXTIRPATION OF THE SPLEEN, FOR DISEASED CONDITIONS OF THAT ORGAN, SINCE 1549.*

FOR DISEASES OF THE SPLEEN UNASSOCIATED WITH LEUCOCYTHÆMIA.													
DATE.	COUNTRY.	OPERATOR.	PATIENTS.	NATURE OF DISEASE.	DURATION OF DISEASE.	EXTERNAL INCISION.	MANAGEMENT OF PEDICLE.	ACCIDENTS DURING OPERATION ETC.	RESULT OF OPERN.	CAUSE OF DEATH.	POST-MORTEM APPEARANCES.	WEIGHT OF SPLEEN.	REMARKS UPON CASE.
1549	Naples	Zaccarelli	Sex.† Age. F. M., 24 yrs.	Enlargement after ague	No account	Over tumour	Ligatured <i>en masse</i>	None	Recov.	....	....	2lb. 15oz.	"Six years after, no trace of spleen; liver large; omentum shrunken." Possibly this was a splen-culus.
1711	St. Carignan	Ferrutus	F. M., 30 yrs.	Sequestered spleen in peri-toneal abscess	5 months	Abscess opened on left of umbilicus	Ligatured <i>en masse</i>	None	Reco- t	....	....	No account	
1826	Rostock	Quittenbaum	F. M., 22 yrs.	Secondary tumour after cirrhosis	1½ year	Median line, 10 inches long	1 thick ligature (silk)	No account	Died	Hæmorr., in 6 hours	Liver cirrhotic; ligature embraced point of pancreas	5lb. 8oz.	
1855	Darmstadt	Küchler	M., 36 yrs.	Hypertrophy asso. with cirrhosis. Malarial fever 14 years before	1 year	4 inches along external edge of left rectus abdominis	7 ligatures on pedicle	None	Died	Hæmor- rhage, in 2 hours	Liver cirrhotic, 1lb. 4oz.; blood in peritoneal cavity; branch arteria lienalis not tied	3lb. 5oz.	
1865	England	Spencer Wells	F. M., 34 yrs.	Simple hypertrophy	1 year	7 inches along external edge of left rectus abdominis muscle	Ligatured in 2 bundles, and re-turned. 2 arteries and 12 veins tied	During removal of spleen (before ligatures applied) splenic vein gave way. Clamp appli- ght. fixed	Died	Throm- bosis (?), in 158 hours	A large fibrinous clot in right side of heart	6lb 15oz.	It remains an open question whether this patient died from thrombosis or blood-poisoning; from the history of the case we are inclined to believe in the latter.
1867	Paris	Péan	F. S., 20 yrs.	Hypertrophy. Unilocular cyst containing much viscid fluid (3 litres)	2 years	Incision made in median line between xiphoid and umbilicus	4 metallic ligatures. Pedicle cauterised	Owing to ex- tensive adhesions, detachment of spleen was tedious and difficult	Recov.	....	....	2lb. 8oz.	Two months after the operation this patient was presented by M. Péan to the Academy of Medicine at Paris. She was then quite well.
1873	Cesana	Urbinato	No account	Hypertrophied wandering spleen, with much neuralgic pain	Not given	Median line, 7 inches long	7 ligatures to vessels. Pedicle secured with metallic ligature	None	Died	Peritonitis, in 3 days	No account	2lb. 14oz.	During the operation but little blood was lost; pedicle returned into abdominal cavity.
1873	Strasbourg	Koeberlé	F. M., 27 yrs.	Hydatid followed by a sanious discharge	4 years	No note	No note	Very firm adhesions	Died	Shock, in 17 hours	No account	Not given	
1876	Paris	Péan	F. M., 24 yrs.	Simple hypertrophy	1½ year	Median line, 3 inches above umbilicus to an inch and a half above pubes	Tied <i>en masse</i> , and brought out at lower angle of the wound	No adhesions	Recov.	....	....	2lb. 7oz. 14d.	The pedicle was brought out at lower angle of the wound, on account of enormous size of blood-vessels and lymphatics. Patient quite well three months after, and was exhibited by M. Péan at the Academy of Paris.
1877	Berlin	Martin	F. M., 31 yrs.	Wandering spleen, the seat of severe neuralgia	2 years	In median line, 4 inches from umbilicus towards pubes	Vessels tied. Pedicle secured by silk ligature, and returned	"Silk ligature slipped and wounded an artery, causing hæmatoma around vessels"	Recov.	....	....	Slightly larger and heavier than natural	Operation performed in 28 m. Patient went back to work in 3 weeks. Dyspepsia during 3rd week. Menses ceased for 6 weeks. No alteration in proportion of white and red globules.
1878	Heidelberg	Czerny	F. M., 30 yrs.	Wandering spleen	Not given	Median line	Ligatured <i>en masse</i> , and returned	No account	Recov.	....	....	Not given	This operation was probably performed for the severe neuralgia which not unfrequently attacks wandering spleens.
—	America	Volney D'Orsay	No account	Enlargement from malaria	Not given	No note	No note	No account	Recov.	....	....	Not given	This case is given on the authority of Prof. Albert (vide his "Lehrbuch der Chirurgie," vol. iii., p. 472).
1881	Udine, Italy	Franzolini	....	Simple hypertrophy	....	....	Pedicle ligatured and returned	....	Recov.	....	....	Over 3lb.	

DATE.	COUNTRY.	OPERATOR.	PATIENTS.	NATURE OF DISEASE.	DURATION OF DISEASE.	EXTERNAL INCISION.	MANAGEMENT OF PEDICLE.	ACCIDENTS DURING OPERATION ETC.	RESULT OF OPERN.	CAUSE OF DEATH.	POST-MORTEM APPEARANCES.	WEIGHT OF SPLEEN.	REMARKS UPON CASE.
1866	England	Bryant	Sex. M., 20 yrs.	Leucocythæmia	6 months	Vertical, 5 in. on left side from cart. of 8th rib to ant. sup. spinous process	Clamp applied, 3 vessels tied; pedicle ligatured in 2 parts; clamp rem.; ped. ref.	One small adhesion near the posterior margin, from which hæmorrhage occurred when divided	Died	Hæmorr., in 1½ hour	Clot in each cavity of heart; clot 1½lb. in abdominal cavity; clots like straw-berry cream	4lb. 7oz.	Great trouble and some difficulty were occasioned by free hæmorrhage from lower and back part of spleen during operation.
1867	England	Bryant	F., 40 yrs.	"	2 years	Left loin, commencing at ribs, opposite ant. sup. spinous process, and curving to crest of ilium	Pedicle 4 inches in diameter, ligatured in 4 parts with strong whipcord	Numerous rotten sponge-like adhesions, giving rise to uncontrollable hæmorrhage	"	Hæmorr., in 15 min.	Heart contained very little blood, which was liquid in both cavities. One pint of blood in region of spleen	10lb. 4oz.	The great difficulty in this case was due to the hæmorrhage from the rotten adhesions connecting spleen to diaphragm. Liver weighed 138 ounces. Leukæmic clot well marked.
1867	Strasbourg	Koerberlé	F., 42 yrs.	"	3 years	Median line, 8 inches long	Vessels tied in 6 or 7 positions, and divided between ligatures	Considerable hæmorrhage from small vessels, which was never arrested	"	Hæmorr., "soon after"	No account	17lb. 8oz.	The splenic artery was as large as the femoral. Splenic vein 2½ centim. in diameter. Patient never recovered consciousness.
1873	England	Spencer Wells	—	"	....	....	....	....	"	Perit., on 3rd day			
1876	England	Spencer Wells	—	"	....	....	....	....	"	Hæmorr., in a few hours			
1873	Edinburgh	Watson	M.	"	2 years	Median line, 2 inches above and below umbilicus	In 2 halves, by a strong double ligature	Vasa brevia gave great trouble in tying them	"	Hæmorr., or shock, during operation	No account	12lb.	
1877	Vienna	Billroth	F. M., 45 yrs.	"	3 years	Median line, 4 inches above and below umbilicus	Ligatured in 6 parts	None	"	Hæmorr., in 4 hours	A quantity of soft coagulated blood in abdominal cavity; tail of pancreas wounded; 1 ligature separated	6lb. 9oz.	Hæmorrhage appears to have been caused by the separation of a ligature during defæcation.
1877	Vienna	Billroth	M., 40 yrs.	"	4 years	Median line, umbilicus to symphysis pubis	Lig. in 10 parts; galvano-cautery to arrest bleeding	Uncontrollable hæmorrhage from adhesions	"	Hæmorr., within an hour	No account	11lb. 11oz.	Uncontrollable hæmorrhage from small vessels in adhesions.
1877	England	Langley Browne	M., 20 yrs.	"	8 months	Linea alba	Vessels ligatured separately; pedicle secured by double ligature	No account of any	"	Shock, in 5 hours	"	18lb. 8oz.	This patient appears to have borne the operation well, but to have died suddenly 5 hours after.
1877	Behar	Fuchs	F. M., 40 yrs.	"	1½ year	Linea alba, 9½ inches long	Nine ligatures on pedicle	No account	"	Hæmorr., in 18 hours	"	12lb. 13oz.	
1877	Sacramento	Simmons	M., 40 yrs.	"	3 years	Linea alba, 3 inches	Ligatured in many divisions	Strong adhesions with diaphragm	"	Hæmorr., in 2½ hours	No post-mortem exam. made	7lb. 8oz.	No considerable amount of blood lost during the operation.
1878	Heidelberg	Czerny	No account	"	No account	No account	No account	No account	"	Hæmorr., in a few hours	No account	No account	The operation occupied 70 minutes, the greater part of the time being spent in securing small vessels. Two ounces of milk transfused by gravitation. No post-mortem examination made.
1878	England	Arnison	M., 37 yrs.	"	1 year	Median line, 2 inches each side of umbilicus	Vessels secured with 3 whipcord ligatures	Much difficulty in arresting hæmorrhage from adhesions	"	Hæmorr., in 5 hours	No post-mortem exam. made	7lb. 13oz.	
1878	Kssen	Geiswell	F. M., 39 yrs.	"	No note	Median line, 10 inches	No account	No account	"	Hæmorr., in 16 hours	No account	9lb. 15oz.	
1881	England	Haward	F., 49 yrs.	"	....	....	....	....	"	Shock, in 5 or 6 hours	....	7lb. 8oz.	
—	England	Baker Brown	No account	"	No account	No account	No account	No account	"	Shock, during operation	No account	No account	I quote this case on the authority of Czerny (vide M. Nedopil, "Wiener Med. Wochenschr.," 1879, Nos. 13 to 17).

The above table comprises 13 operations for diseased conditions of the spleen, unassociated with leucocythæmia, and 16 in which the hypertrophy of the gland was connected with leucocythæmia. We see that out of a grand total of 29 cases, we only have 8 recoveries, and all these were for conditions entirely unassociated with leucocythæmia.

* In this table the following authorities have been consulted:—Professors, Albert, Lehrbuch der Chirurgie; M. Nedopil, Wiener Med. Wochenschr. (1879); the American Journal of Med. Sciences; THE LANCET, various numbers from 1866; Med. Times and Gazette; Path. Transactions; the Brit. Med. Journ.; and numerous others.
† Although present at this operation, I have purposely abstained from giving it in detail, as I have reason for believing that it will appear before the profession at no distant date.

1866, and again in 1867, these patients suffering from enlarged spleen associated with leucocythæmia, and both sank almost immediately after the operation.²

Since Mr. Bryant's second case in 1867, splenotomy has been performed in different parts of the world in no less than twenty-two cases of diseased conditions of the gland, and some twenty-six times for injuries implicating the spleen. Dr. Nussbaum, on whose authority I make the latter statement,³ informs us that sixteen out of these twenty-six operations proved quite successful. I will dismiss this class of cases with the above notice, and make a few remarks on the subject of splenotomy being a justifiable operation in leucocythæmia.

It will be seen from the Table that out of a total of twenty-nine cases splenotomy has been performed no less than sixteen times for leucocythæmia, and on thirteen occasions for various other morbid conditions of the spleen. It is equally apparent that out of the thirteen cases in which leucocythæmia was absent, no less than eight recoveries are recorded; while out of the sixteen in which the latter disease was present there is no instance in which the patient recovered even from the primary effects of the operation. Now, it must strike the most casual observer that the fatality, in these latter cases, is due to something outside the mere effect of the operation, which in itself appears to be less dangerous than one might reasonably be led to expect. And, surely, few will deny, although many appear to forget, that this "something" is actually present in these cases, and readily explains the cause of surgeons losing at the rate of a hundred per cent. after splenotomy in leucocythæmia.

Let me here quote from the pen of Dr. Gowers, in Reynolds' "System of Medicine,"⁴ who, *à propos* this subject, remarks: "In leucocythæmia the tendency to hæmorrhage is unquestionably greater than in most cases of simple splenic anæmia, and this constitutes a danger so great as to render the operation [splenotomy] scarcely justifiable in the advanced stages of the disease. Naturally a risk of immediate death so great as is and must be involved in the operation is only consented to when the disease is advanced, and the œdema and dyspnoea in themselves indicative of the greatest source of risk—the profound blood change. We are yet, moreover, without any evidence as to whether the removal of the spleen would be attended with an improvement in the deficiency of the red globules, which constitutes the greatest source of danger." Dr. Gowers tells us there is no evidence to prove that removal of the spleen would produce any alteration in the relation of white and red globules; and although it must be admitted that we possess no such evidence from cases in which the operation has been performed for leucocythæmia—for the simple reason that no case has lived to tell the tale—we do possess valuable evidence to prove that in some of those cases which have recovered after extirpation of the spleen for simple disease, the normal relation between the two sets of corpuscles has remained unchanged.⁵ In fact, what little we know of the pathology of leucocythæmia is certainly in evidence of its being a general disease affecting all the lymphatic structures of the body, as well as the blood stream, and but little likely to be influenced by the removal of any one part concerned. Professor Mosler,⁶ writing on excision of the spleen as a remedy in leucocythæmia, thus concludes his remarks: "These facts lead us to the conclusion that neither in the early nor in the late stages of leucocythæmia is splenotomy justifiable; and, indeed, that operations even of the most trifling character are to be as far as possible avoided."

I will close this paper by quoting Mr. Bryant's concluding remarks upon the result of his two cases.⁷ He writes: "We have thus learnt two things from the cases related. Firstly, that the enlargement of the spleen in leucocythæmia appears to be only a part of a general disease affecting the glandular system as a whole; and, secondly, that in splenotomy, for such a disease there is a predisposition to hæmorrhage, with which surgery is incompetent to deal. It can neither be foreseen by any amount of care, nor coped with by any amount of skill. Under these circumstances there is no shirking the conclusion that the operation is physiologically unsound and surgically unsafe, and for leucocythæmia should not be performed." To these

remarks, coming as they do from one who has fully realised upon how slight a fabric the theory of splenotomy as a remedy for leucocythæmia is built, it will surely be unnecessary to add more. And, in conclusion, let me trust that the recorded facts, as represented in the appended Table, together with the condemnation of the operation by the high authorities I have quoted, will suffice to prevent the further repetition of this useless and deadly experiment.

Turnham Green, W.

INFLAMMATORY ENLARGEMENT OF BONE.

By CHARTERS J. SYMONDS, M.S., F.R.C.S.,

ASSISTANT-SURGEON AND SURGICAL REGISTRAR TO GUY'S HOSPITAL.

IN Professor Lister's address on the "Relation of Micro-organisms to Inflammation," published in THE LANCET of Oct. 22nd, 1881, there occurs towards the end, a statement which I venture to think is somewhat erroneous. After giving several examples of the influence of nerve action in originating and maintaining inflammation, he relates a case of "white swelling, a gelatinous degeneration of the synovial membrane of the knee-joint," in which it is said that "sympathetically the bones also had become affected, and the ends of both the tibia and the femur were greatly enlarged." This remark from one so prominent must necessarily carry with it the weight of authority, and in attempting to show that it is at least difficult to conceive such a condition occurring in a bone from simple osteitis, I am fully aware of our respective positions in the field of pathological research.

As the subject of hypertrophy of bone is one of considerable breadth, I would first state that the object of the present communication is an attempt to show that all inflammatory enlargement in bone is due to periosteal deposit; and that simple caries never increases the size of a bone until it invades the periosteum, when the latter, where healthy, lays down a variable amount of new material around the carious area. It seems a matter of indifference as regards enlargement, whether the osteitis be a primary one, or, as in Professor Lister's case, secondary to synovial disease; nor does it seem to matter whether the inflammatory product suppurate, caseate, or organise.

The term "sympathetic hypertrophy," as applied to bone, appears to indicate some connexion with the increase of secreting glands, such as the mamma, and to be either temporary or permanent. Temporary swelling of a bone, from a vaso-motor condition, will, I imagine, be allowed, from the nature of things, to be impossible. Even admitting a permanent increase from central changes, which I hope to show later on may be otherwise explained, it is difficult to imagine what becomes of the articular cartilage, itself a non-vascular structure intimately connected with the bone.

Having, during the past two years, as Surgical Registrar of Guy's Hospital, had frequent opportunities of examining the excised articular ends of bones, particularly of the femur and tibia, I have carefully investigated the question of enlargement, with the result that in no case has this change been observed in pulpy disease. The joints have exhibited all stages of gelatinous degeneration, the bones in some being extensively carious. In other specimens removed by amputation, no enlargement was found even with advanced necrosis of the articular surfaces. Those cases where stalactitic-like masses surround the articular ends—a condition allied apparently to the changes in rheumatic gout—are of course not included, the increase here being a surface one, and occurring only in the middle-aged.

In the clinical examination of these cases there always appears to be enlargement of the articular ends, more especially of the lower extremity of the femur. This, however, is explained, first, by the fact that the extreme wasting of the thigh throws out into unnatural prominence the femoral condyles. By pressing up the structures behind the bone, and so bringing the transverse diameter of the thigh nearly equal to the sound side, the undue prominence to a great extent disappears. There is, however, a distinct increase in the size of the joint, varying in the transverse measurement from one-eighth to one-fourth of an inch, an amount easily explained by the thickening of the synovial membrane and ligaments from infiltration of the granulation

² Vide Guy's Hospital Reports, Series iii., vols. xii., xiii., pp. 444, 411.

³ Vide Nussbaum's Deutsche Chirurgie. ⁴ Vol. v., page 304.

⁵ Vide Moulin's case in table, and Brit. Med. Jour., Feb. 9th, 1878.

⁶ THE LANCET, Jan. 10th, 1880.

⁷ Vide Guy's Hospital Reports, vol. xiii., page 411.