been so provocative that a promise had been obtained from Mr. Fitzwilliams that he would later submit a scheme of collecting the histories and records of treatment for the executive to consider, in order that the co-operation of the county council of Monmouthshire and the borough council of Newport might be enlisted with reference to dealing with the cancer problem in their area.

Dr. A. W. HAYLES, in seconding the resolution, said that from his standpoint as a general practitioner he welcomed the suggestions thrown out by Mr. Fitzwilliams, and would do all in his power to help in devising a cancer scheme for Monmouthshire.

Reports of Societies.

MEDICINAL INDUCTION OF LABOUR.

AT a meeting of the North of England Obstetrical and Gynaecological Society at Sheffield on November 20th, 1925, Mr. M. H. PHILLIPS in the chair, Dr. K. VERNON BAILEY (Manchester) read a paper on the clinical aspect of medicinal induction of labour.

Dr. Bailey said that since the publication of A. C. Williamson's paper on the induction of labour by the use of castor oil and quinine, which appeared in *Surgery, Gynecology and Obstetrics* in 1922, much interest had been taken by the staff of St. Mary's Hospitals (Manchester) in this particular treatment, and during the last few years labour had been induced very often by this method, or a slight modification of it. The efficiency of a combination of quinine and castor oil in stimulating the uterus to contract, and the specific action of those drugs on the uterine muscle, which had been discussed by Williamson, had been definitely established. The drugs were administered in the following way. A dose of 2 ounces of castor oil was first given, followed one hour later by half an ounce of a mixture containing quinine sulphate gr. x, acid. sulphur. dil. ♏x, glycerin ♏xx, sp. chlorof. ♏v, and water to the half-ounce. One hour after this a simple enema was administered, and two hours later another dose of the mixture. Three hours later a further dose of the mixture was given, and another in four hours. Some patients in this series were also treated with pituitrin in 1/2 c.cm. doses half-hourly, commencing five hours after the last dose of quinine, and 3 c.cm. in all given. The method resembled that described by Watson; 40 gr. of quinine were used, but the treatment was discontinued where nausea or ringing in ears was complained of. The chief indication for induction of labour by medicinal means was uncertainty as to the progress of the labour, and cases in which induction by mechanical means was contraindicated, owing to the possibility of Caesarean section being required. The risk of sepsis after Caesarean section was increased by previous vaginal examination; this applied to induction by mechanical means where delivery by Caesarean section eventually became necessary.

Many cases in which there was doubt as to the progress of labour terminated successfully, the child being born normally and without forceps, after labour had been induced medicinally. During the course of such a labour Caesarean section could be resorted to if necessary without increased risk. In his series of cases the primiparae exhibited some degree of minor pelvic contraction. The presentation and position being normal, the foetal head might be (1) mobile at the pelvic brim, possibly due to causes other than the pelvic contraction; (2) fixed at the pelvic brim, but exhibiting some very slight degree of "overlapping"; (3) fixed but high, its greatest diameter being above the plane of the pelvic brim. The pregnancies ranged from eight months to post-maturity, and it was considered that delivery *per vias naturales* was a sound possibility; thirty-eight cases were of this type. Multiparae usually presented a history of previous difficult labours due to pelvic contraction, or of progressively large children; forty-nine cases were of this type.

Cases of uterine inertia might continue unduly; if there was dilatation of the os uteri, or if the membranes had ruptured some hours previously, it might be better to recommence active labour as soon as possible, considering both the child and the risk of sepsis to the mother. Another type of case admirably suited to this treatment comprised certain cases of accidental haemorrhage and marginal or lateral placenta praevia. Many of these patients when first seen were in a condition of temporary relief following a smart haemorrhage, or exhibited a constant but slight loss, the uterus was contracting irregularly and at long intervals, or not at all, and there was little or no dilatation of the os. Medicinal induction of labour in these cases, where the risk of sepsis was greatly increased by interference, was attended by great success. The harmlessness of the treatment, and the high percentage of successful results obtained, had led to the employment of it in other types of case where induction might justifiably be undertaken by mechanical means, and in cases where medicinal treatment had not been successful alone in starting labour, induction by bougies, within twenty-four hours afterwards, usually succeeded. Post-maturity reacted well to this treatment (twenty-five cases), and the method was used for severe albuminuria or threatened eclampsia in eight cases. Though labour might not commence after this treatment alone, Dr. Bailey believed that the specific action of quinine on the uterine muscle was maintained to such a degree during the following twenty-four hours that added mechanical stimulation (by bougies) quickly brought about regular contractions. Patients differed so much physically and temperamentally that it was difficult to define the effect of this treatment on the progress of labour. Shortening of the first stage appeared to result sometimes, but the most regular feature was the relatively painless nature of the uterine contractions which occurred in 70 per cent. to a greater or less degree. In some patients it was so marked as to approach a condition of painless uterine contractions, and only careful observation of the uterus showed that labour was in progress. The pulse and temperature in an uncomplicated case showed no variation from that in normal labour. Considering the type of case the number of forceps deliveries was comparatively small (nine of the seventy-eight), and in these the low forceps operation was employed for the usual indications. Dr. Bailey believed that the course of quinine given as described, even if it failed to initiate uterine contractions, increased the tone of the uterine muscle itself. If pituitrin was given when the uterine muscle was in this condition, immediately after the course of quinine, it was not so liable to produce that state of irregular and spasmodic contraction which was known to cause rupture of the lower uterine segment. Pituitrin was given to the first nineteen patients of his series without any untoward occurrence. The percentage of successes (68.4) with its use was not so high, however, as that obtained by the use of quinine and castor oil alone (72.7 per cent.). He believed it was unsound to employ a drug like pituitrin, of admittedly great power but of uncertain action, in the first stage of labour. The later fifty-five cases of the series were conducted without its use. Dr. Bailey thought, however, that pituitrin might be of assistance, with negligible risk, in induction of inevitable abortion when the uterus did not exceed the size of a five months pregnancy. It was especially useful in the completion of an inevitable abortion at anything up to three and a half months. From this up to five months a course of quinine and pituitrin, followed by a hydrostatic bag, was very successful. He believed that the danger of producing irregular and spasmodic uterine contractions by the administration of pituitrin was minimized by the quinine course immediately preceding it, and that its use in the production of complete abortion at the dangerous stage up to three and a half months, or even up to five months, was legitimate. Conditions were not then favourable to uterine rupture during labour. Beyond this stage, he believed, pituitrin should never be used, as the production of anything but regular and uniform uterine contractions was extremely dangerous. In this series labour had been successfully induced by purely medicinal means in 57 of the 78 cases (73 per cent.). In a small number of the earlier cases pituitrin was used in addition to quinine and castor oil, which were used alone in the majority of the cases. The percentage of successes was greater in those

where pituitrin was not used; it would appear, therefore, that the addition of pituitrin in no way increased the possibility of success. The high percentage of successful inductions by medicinal means assigned to this method a place in obstetrics. The proportion of successes was higher than Williamson's (46.6 per cent.) and Muschalli's (58.6 per cent.), but not so high as Watson claimed with the additional use of pituitrin (90 per cent.). Williamson, in reviewing his cases, had stated that the noteworthy points about the successful ones were: (1) the patient was due, or overdue, in point of time; (2) the head was fixed or beginning to engage; (3) the cervix was partially or completely obliterated and the external os would admit a finger. In the series here reported there were many successes with premature cases and in others, where the foetal head was mobile and the cervix closed. From a survey of these it appeared, therefore, that quinine was definitely able to act upon a closed cervix, a point which Williamson apparently considered doubtful.

In conclusion, Dr. Bailey expressed the view that there was a definite class of case in which this treatment was particularly useful—cases in which induction of labour was indicated but where methods involving vaginal intervention were contraindicated (border-line cases between the normal and abnormal from the purely mechanical point of view). Only in two cases of the series was it found necessary to perform Caesarean section after labour had been induced by this means. Had it been necessary to perform Caesarean section after mechanical attempts to induce labour had been made, the prognosis would have been graver than after the use of this medicinal method.

Mr. M. H. PHILLIPS (Sheffield) expressed his strong approval of this method of induction, especially when the cervix was infected. He would not care, however, to rely on it in cases of placenta praevia. He wished to know the relative proportion of successes in premature and full-term or post-mature inductions. The time element also was important.

Dr. DOUGAL (Manchester) had used the quinine and castor-oil method during the last three years, and found it most useful. He had never seen any ill effects follow either in the mother or child, but he had recently heard of a case where the child was born asphyxiated and did not recover, and this misfortune was thought to be due to the powerful uterine contractions induced by quinine. He would like to know whether Dr. Bailey had met with any similar cases in his series. Like most other methods, it was particularly successful when the pregnancy was about, or past, full term, or when the ovum was dead, but these were often the cases where a simple and harmless method was most called for. He had had cases of missed abortion where the uterus had completely emptied itself after the administration of these drugs. Cases of delayed onset of labour were often a source of considerable anxiety to those in attendance, and for these he strongly recommended the castor-oil and quinine method. He had known such patients start labour very quickly, and deliver themselves within twenty-four hours. Occasionally the method was almost too successful, and he related a case where labour started about three hours after the commencement of the method, and was completed within an hour and a half before either the accoucheur or his anaesthetist could arrive. He had not much experience of pituitary extract in induction of labour, but thought that there could be no objection to its use before the commencement of uterine contractions. He certainly would not hesitate to use it, if necessary, in those cases where it was desired to empty the uterus during the first half of pregnancy.

Mr. W. W. KING (Sheffield) had used the quinine and castor-oil induction a large number of times in the last few years, but he usually gave collosol calcium as a preliminary; he believed that this added to its usefulness.

Mr. J. CHISHOLM (Sheffield) said he was much interested in the analgesic effect which Dr. Bailey had described as following the use of this method. He did not think it was right to employ this method in the treatment of placenta praevia.

Dr. BAILEY, in reply, said that medicinal induction was only used for true accidental haemorrhage or the high type of marginal placenta praevia; it would not be employed in cases of central placenta praevia. Sufficient data were not to hand to make any definite conclusion possible with regard to the lapse of time between the commencement of the treatment and delivery; in some cases delivery occurred before the termination of the treatment, and in others up to twenty-eight hours after its administration. In cases of contracted pelvis the pelvis was carefully examined and efforts made to approximate the foetal head to the pelvic brim in cases subjected to this treatment. Dr. Bailey had never seen a case in which the child had become asphyxiated on account of the force of the uterine contractions. Of the seventy-eight cases of the series, all but thirteen were not in labour at the commencement of the treatment. In no case had calcium been employed, as suggested by Mr. King.

ESTIMATION OF THE PATENCY OF THE FALLOPIAN TUBES.

AT a meeting at the Liverpool Medical Institution on December 17th, 1925, a joint contribution on sterility due to impalpable tubal defects, by Drs. BLAIR BELL, R. E. ROBERTS, J. ST. G. WILSON, and S. B. HERD, was read by Dr. HERD.

Dr. Herd outlined the accepted methods of treatment for female sterility, and showed that vaginal operations were frequently useless. The adoption of the tubal patency test by insufflation was very valuable as a means of controlling surgical procedures and avoiding unnecessary operations. Reference was made to the work and methods of Rubin, Dickinson, Forsdike, and Blair Bell, and a description given of the technique and apparatus employed by the last named, a hand bulb, reservoir manometer, and cannula being used, and air employed. Thirty-one patients had been tested in this way without serious discomfort or disability. Radiological examination was always used, and, in all cases in which operations followed, the previous diagnosis of the state of the tubes was confirmed. Insufflation was only used for diagnosis, and no therapeutic value was claimed for it.

Dr. R. E. ROBERTS gave an account, with illustrative skiagrams, of the radiological features in the diagnosis of patency of the Fallopian tubes. The uterus having been insufflated, any air which had passed through the Fallopian tubes would tend to rise to the highest point in the peritoneal cavity, this point depending on the position of the patient. After the uterine insufflation the patient sat up or stood, and after a short interval in which the air had opportunity to rise in the peritoneal cavity, an *x*-ray examination was made of the diaphragmatic and hepatic area in the erect position, a skiagram being invariably taken. If the Fallopian tubes were both occluded, no air would have entered the peritoneal cavity and the upper border of the liver could not be distinguished from the diaphragm. If, however, one or other Fallopian tube was patent and air had entered the peritoneal cavity by this route, the air would have risen to the under surface of the diaphragm and would be shown in the skiagram as a translucent area between the diaphragm (which appeared as a delicate curved line) and the liver, the extent of this translucent area depending on the amount of air which had passed in. Even very small quantities of air could as a rule be demonstrated by this method, but it was conceivable that if the tubes were almost occluded the amount of air entering the peritoneal cavity would be so small that it might become entangled in the mesenteric folds and so fail to reach the subdiaphragmatic area.

Mr. ST. G. WILSON thought that inflation was most suitable for cases of "one-child sterility" when several years had followed the last confinement. Inflation alone could not always be relied on for a correct result, and he therefore advised injections with lipiodol in all cases which gave negative results with inflation. The clinical signs of passage of air through the tubes was unsatisfactory; he therefore always recommended the use of radiology.

Prognosis of Auricular Fibrillation.

Dr. WALLACE JONES contributed a note on some points in the prognosis of auricular fibrillation, based on the analysis of statistics of a series of patients attending the

heart department at the Royal Infirmary. The dominant factor in prognosis was the condition of the heart muscle. Information with regard to this would be naturally classified as clinical evidence and electro-cardiographic findings. The symptoms accompanying the onset were very important and, when marked, indicated limitation of the reserve force of the heart, and in consequence considerable myocardial damage. The investigation was made to determine the expectation of life from the time when the cases first presented themselves with symptoms of cardiac failure until they died. It was shown that auricular fibrillation in these cases was more serious in senile than in rheumatic heart disease; that in mitral stenosis the expectation was slightly lengthened by the presence of auricular fibrillation, while in aortic regurgitation this effect was more marked. The prognosis was better in females than males in all types. In the electro-cardiographic findings the presence of a bizarre Q.R.S. curve was of serious significance.

PLASTIC SURGERY.

AT a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, held on December 4th, 1925, the President, Mr. R. C. B. MAUNSELL, in the chair, Mr. T. P. KILNER delivered an address on the principles of plastic surgery and gave a lantern slide demonstration of case records illustrating the following procedures.

Mr. Kilner at the outset gave a description of the method of cutting and applying Thiersch skin grafts and their employment for the obliteration of a buccal sulcus, for freeing the lip and improving its contour in secondary hare-lip operations, for replacing the lost mucosa of the syphilitic nose, for the treatment of ectropion of the eyelids, for reconstruction of the eye socket, and for burns of the hand. In dealing with Wolfe skin grafts, he described the replacement of forehead skin removed in making forehead flaps for rhinoplasty and the replacement of burnt skin of nose. He mentioned the following forms of simple flap: forehead to eyelid region; forehead to chin region based on the superficial temporal artery; forehead to cheek; a full thickness, muscle-bearing flap; the angle of mouth; and simple advancement flaps on abdominal wall in treatment of *x*-ray burn. He gave an account of the use of fat grafts for a suppressed scar of the cheek and eyelid and of several cases of partial and complete reconstruction of the nose. Dealing with syphilis of the nose, he described the closure of a perforation involving the eyelids and the treatment of typical syphilitic deformity by intranasal skin graft and later a cartilage graft. He detailed the method of preparing the Gillies tubed-pedicle flap, and reported several cases illustrating its wide field of usefulness. These included burns of the hand; extensive reconstruction of the upper lip and cheek; complete reconstruction of the chin and lower lip (including bone graft to mandible); very extensive burn contracture of the neck; repair of partial loss of the external ear (including cartilage grafts); very extensive traumatic loss of skin of thigh and knee region, followed by contracture and complete failure to heal; various other limb conditions —ulcers, wounds, etc.

The PRESIDENT said he was specially interested in Mr. Kilner's remarks about the colour of grafts afterwards, as he himself had constructed a few artificial noses, and had found it very hard to get the graft a good colour. He asked why in two cases of mole, one in the region of the eye and the other in the region of the chin, Mr. Kilner had chosen forehead flaps instead of flaps from the neck.

Mr. M. T. BOURKE referred to the valuable advice he had received from Mr. Kilner in treating a case of very bad facial deformity in which the patient had greatly improved.

Mr. W. PEARSON said that he had had some experience of skin grafting during the war, usually on portions of the body more easily treated than the mouth cavities described by Mr. Kilner. He personally had had 95 per cent. of completely successful cases; his operations usually concerned granulating surfaces, and he thought it was easier to get grafts on granulating surfaces than on raw surfaces. He let the surface granulate for about ten days before putting on the grafts. He used a perfectly dry technique, without any liquid on the knife.

Mr. H. MEADE, referring to Wolfe grafts, said that Mr. Kilner had mentioned that he only cut the graft the exact size of the area he was going to replace; would he do this in areas which were likely to extend? In a recent case encountered the skin loss was on the back of the hand, and any attempt to flex the fingers tended to enlarge the raw area. Regarding skin grafts for burns, he thought the important thing in preventing contraction was to graft early. In Thiersch grafting he did not use silver foil, and left the wound completely exposed to the air.

Mr. W. DOOLIN said that plastic surgery had been practised by the Indians and the Italians, who had recognized the need of a pedicle flap; the Indians took the flap from the head and the Italians from the forearm. When replacing a keloid scar, was it likely that another keloid would form and another operation be necessary? If so, this would nullify an operation which was done purely for the cosmetic result.

Mr. KILNER, replying, said that there was no skin which matched the face skin as well as forehead skin; abdominal skin was not of the same texture, and never looked so well. In rhinoplasty cases it was comparatively easy to excise scar tissue from the inside of the nose in the later stages. He thought that cases of grafting on limbs were much more difficult than intraoral cases. He would always prefer to graft on a newly made surgical surface than on a granulating surface. He never made a Wolfe graft bigger than the area to be replaced, but he always ensured that the area was at its largest before grafting. The grafting of cases of burns early, before contraction occurred, was very important. The productive factor in keloids was tension. He often treated keloid scars by radium therapy, both before and after operation.

OSTEITIS DEFORMANS.

AT a meeting of the Electro-Therapeutics Section of the Royal Society of Medicine on December 18th, 1925 (Dr. A. MACGREGOR in the chair), Dr. R. E. ROBERTS and Dr. J. MORRIS COHEN read a paper on osteitis deformans (Paget's disease of bone). A brief account of the history of the disease, its incidence, etiology, and pathology, was given, and a general survey of the symptomatology and radiological examination of sixteen patients was added. The earliest symptom was, as a rule, pain in the lower limbs, especially after walking; in some of the cases muscular weakness was complained of. Deformities and head enlargement were as a rule late changes, and spontaneous fracture had occurred in three cases. In several of the cases Paget's disease was unsuspected till a radiological examination of the affected part had revealed the characteristic bone changes, the diagnosis being confirmed by a further *x*-ray examination of the skull, pelvis, and other bones. Often widespread bone changes were discovered in parts where there had been no clinical evidence of disease. The importance of making a radiological examination of any adult case of obscure limb pain was thus made clear. A detailed account of the *x*-ray appearances at various stages of the disease was given, with illustrative skiagrams, and deductions made as to the pathological processes producing them. Attention was drawn to the similarity of *x*-ray changes found in osteitis deformans and osteitis fibrosa, suggesting that both conditions were closely allied if not identical. Treatment of the disease was at present unsatisfactory, but in one of the cases definite radiological evidence of improvement was found to follow the use of parathyroid extract, cod-liver oil, and calcium lactate, the *x*-ray appearances of the skull and femur suggesting that the disease was becoming, or had become, quiescent. The paper was discussed by Mr. THURSTAN HOLLAND and Drs. SHILLINGTON SCALES, COLDWELL, JORDAN, PARKES WEBER, and COLLINGWOOD.

Dr. P. J. BRIGGS read a paper on methods of examination of the pelvic caecum, in which were described and illustrated three methods for bringing a low caecum and appendix out of the pelvis for proper palpation.