the swelling did not subside he attended the out-patient department, and the swelling was tapped, yielding a few ounces of obviously altered blood. In spite of treatment the swelling continued to get larger at a rather more rapid rate. The following fortnight the patient commenced to feel unwell, remained in bed, his appetite failed, and he experienced intense thirst (15 pints per diem).

Physical examination revealed a well-nourished youth with a large right-sided scrotal swelling, which was somewhat opaque to transillumination, only slightly tender, and slightly fluctuant. On these grounds the swelling was provisionally diagnosed as a haematocele, and operation performed through a right inguinal incision, when a large tumour of testis and tunica vaginalis was exposed. This was removed as high as possible. The wound was closed with drainage for forty-eight hours.

As an immediate result of the operation the general symptoms were somewhat ameliorated until eighteen days later, when an acute facial diplegia occurred. This persisted in spite of treatment. Although there was rapid healing of local wounds there was soon ample evidence of pelvic secondaries, followed by pulmonary and spinal involvement. Death from exhaustion ensued approximately seven months after original accident.

Post-mortem Examination.—Extreme emaciation. There was a large sacral bed-sore, a well-healed inguinal scar, and a right-sided amputation of scrotum and testis. There was no abnormality in the alimentary or cardiovascular systems. Remaining structures of the uro-genital system were normal.

The osseous system showed a pathological fracture of right third costo-chondral junction, with secondary deposit locally. There were subdural miliary and plaque-like secondary deposits all over the skull and meninges, and numerous intramedullary deposits. The subdural growths involved the exits and meningeal sheaths of both facial nerves.

Several localized tumours were present in the cord at varying levels, and there were numerous pulmonary and pleural secondaries.

Lymph nodes showed abundant metastatic deposits, chiefly in the aortic and right inferior mesenteric chains.

Sections of primary and secondary growth showed a typical round- and spindle-celled sarcoma with extremely active mitosis.

CASE II

In July, 1931, a Sealyham bitch, aged 12, was chasing a rat in the garden when she staked herself on one left breast. The wound bled freely, and was dressed by the owner with a lysol dressing. The lesion healed by secondary intention, leaving rather a puckered scar. At the time of the original injury there was a good deal of bruising seen, and the swelling associated with this never subsided. The case was first seen by a veterinary surgeon in September, 1931, when the lesion was an enormous mammary growth, showing at its most prominent part a recently healed puckered scar. The tumour was excised under general anaesthesia, and the wound healed briskly by first intention.

In December, 1931, a swelling began to appear from under the ribs, the dog went off her food, and the swelling continued to increase in size. This was shown later to be a large secondary hepatic deposit. The animal died from asthenia and secondary liver growths in January, 1932. There was no post-mortem.

Examination of Specimen.—Large nodular encapsulated tumour of left mammary region—weight, 2 lb. (total weight of the animal, 12 lb.). The tumour bears on the cutaneous surface a stretched fibrous scar; the area of skin surrounding this is depressed, and sections taken at this point show a dense belt of fibrous tissue separating skin from tumour, which elsewhere pushes up immediately beneath the skin. Large areas of the tumour show yellow or haemorrhagic degeneration, with some hyalo-colliquative necrosis and cystic degeneration.

Microscopical appearances: In one area there is considerable epithelial hyperplasia, elsewhere the skin is thinned and atrophic. The cutaneous appendages extend well into the scar tissue. Some dilated, epithelial-lined spaces are seen; these are possibly of sweat-gland origin. The tumour itself is composed of spindle cells, sometimes closely packed, sometimes oedematous and interspaced with inflammatory cells. There is a certain amount of variation in cell size and form. Large vascular spaces, many formed of tumour cells, are

present. Much hyaline degeneration is also seen. The tumour is a fairly malignant spindle-celled sarcoma.

The cases, both of which have been confirmed by careful microscopical examination, are interesting from the point of view of the association of sarcoma and known trauma.

I am indebted to Mr. Dickson Wright for permission to publish Case I. I should also like to express my thanks to Mr. C. H. Bryans, M.R.C.V.S., of Bournemouth, who so kindly provided the history in Case II, as well as the pathological material.

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AMBULATORY TREATMENT OF VARICOSE VEINS BY COMBINATION OF LIGATION AND INJECTION

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Some disappointment is caused in certain cases of very extensive varicose veins by the difficulty experienced in inducing large veins to react to the various sclerosing solutions. It has been suggested that in these cases two solutions should be injected more or less simultaneously, so as to produce a precipitate of insoluble quinine salicylate crystals in the interior of the vein. I have always felt this to be a very dangerous procedure, for obvious reasons. Further, it is fairly certain that a considerable number of these large veins will recanalize after a time, even when they have been coaxed into thrombosing. Maingot¹ has recently said that 30 per cent. recanalize with sodium morrhuate injections, and Howard, Jackson, and Mahon² have found 98 per cent. to recanalize after sodium chloride injections in a careful analysis of forty-eight cases, followed for a year or more.

TECHNIQUE OF METHOD

Feeling that the solution of both problems lies in a combination of ligation and injection, I have used the simple technique here described for the ligation of varicose veins as part of the ambulatory treatment. The vein selected for ligation is the "parent" vein of a group of veins, and the most prominent, rather than the highest portion of it, is selected for ligation.

The skin is sterilized and anaesthetized with novocain solution. An incision half an inch long is then made across the line of the vein, and when the subcutaneous tissue is reached the small retractor, shown in Fig. 1, is inserted. (This instrument is an adaptation of Irwin Moore's beautifully designed laryngo-fissure retractor.) The vein is then picked up and freed from connective tissue, the retractor removed and turned round, and the prongs inserted under the vein and separated. Owing to the self-retaining nature of the retractor the vein is thus kept on the stretch and elevated out of the wound (Fig. 2). While so held, 2 c.cm. of 5 per cent. sodium morrhuate are injected into the lumen of the vein. The object of this injection is to "fix" the thrombus which will form, after the ligation, above and below the ligature. Two ligatures of catgut are now passed round the vein, at least an inch apart, and the vein divided between them

(Fig. 2, A). Should the portion of vein selected have any tributaries they should be ligated as a preliminary to tying the main vein. It is essential that the vein should be tied cleanly, without the inclusion of any connective tissue, and attention to this with the large stumps beyond the ligatures precludes any chance of a ligature slipping. The wound can be closed with fine silkworm-gut passed through hypodermic needles (Fig. 2, B), so as to reduce the number of instruments required. The retractor and vein stretcher has been made for me by Messrs. Mayer and Phelps, and I have found it useful in other minor operative

FIG. 1

FIG. 2

procedures, usually performed single-handed, where the main difficulties are to keep the wound open and to check oozing. These are overcome by this small instrument.

Specific Advantages

The advantage of this procedure over injection alone is that it hastens the treatment, because a much smaller number of injections are needed to produce results. Such an advantage is too obvious to stress. It is, moreover, absolutely certain to produce results, whereas injection alone often disappoints. The veins below the ligature collapse, so that bulky clots do not form, there is less pain, and the induration of the vein resolves more quickly. Lastly, the method gives a greater guarantee against recurrences than injection alone. I have now treated over one hundred cases by this method without complication of any kind, and I have come to regard it as a very

valuable adjunct to injection treatment of varicose veins of certain types. Moreover, it seems to be perfectly safe, and does not necessitate the patient lying up or abstaining from work. The results are so good that I am surprised multiple ligation was not the method of choice in pre-injection days instead of the rather ruthless and unsurgical procedures often employed in the past, with results which did far from justification to them.

The following illustrates well the type of case which benefits most from this treatment.

CASE RECORD

Miss J. had had repeated attacks of ulceration for the last ten years. She was of stout build. Both legs showed the scars of ulceration, and there were extremely bulky and extensive varicose veins from the groins to the feet. The ulcers had always healed as a result of long rests in bed. Most of the doctors she had consulted previously had held the veins to be too hopelessly diseased to make a cure by injection worth attempting. One doctor had made a series of seven injections in one leg, from one of which she developed a necrosis, but from none of them did any thrombosis result. On account of this history, and the extent of the veins, I regarded her as a case best treated by a combination of injection and ligation. With the right leg I performed three ligation-injections and three simple injections, and secured a complete and uniform thrombosis of all the veins, without any severe reaction. On the left leg two ligation-injections and three simple injections sufficed to effect a very satisfactory cure. I feel sure that with injection alone the treatment would have been very tedious—possibly rather painful—and in this type of case the veins would be likely to recur.

I wish to thank Messrs. Mayer and Phelps for supplying the blocks.

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- ¹ Maingot, R.: *Medical Press and Circular*, December 23rd, 1931.
- ² Howard, H. J., Jackson, C. R., and Mahon, E. J.: *Archiv. of Surg.*, 1931, xxii, 352.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

BASOPHILIC HYPERPITUITARISM (CUSHING'S ENDOCRINE PITUITARY SYNDROME) AND ? BASOPHILIC HYPOPITUITARISM

If Professor Harvey Cushing is right in his suggestion that the remarkable syndrome which he has recently discussed (*Johns Hopkins Hosp. Bull.*, 1932, 1, 137) is due to the presence of a basophil adenoma in the anterior lobe of the pituitary body, and for which he has suggested the term "pituitary basophilism," it might well, for convenience, be referred to as "Cushing's syndrome," at all events till more is known on the subject. My own case of Cushing's syndrome I described (*Brit. Journ. Dermatol. and Syph.*, 1926, xxxviii, 1) under the cumbersome heading of "Cutaneous striae, purpura, high blood pressure, amenorrhoea, and obesity," and to complete the clinical title I might have added "with severe trophic changes in the skin of the legs." Incidentally I should like to correct a slight error in Professor Cushing's careful reference to the case. The minute basophilic adenoma in the anterior lobe of the pituitary body was discovered by Dr. E. Bock (a pupil of Professor Aschoff), who was at that time working as pathologist at the German Hospital. This was almost the first case of the kind in which a pituitary basophilic adenoma was definitely stated to have been present. I afterwards lent the paraffin block, and a photomicrograph of an admirable section made by Professor H. M. Turnbull was sent to Professor Cushing, whence that slight error.