ordination, and either cause the victim to fall under the car or prevent him from getting out of its way. After such an accident it might easily be believed that an injury to a brain already the seat of advanced disease was more likely to be fatal than would a similar injury in an ordinary brain.

A final point of some interest is the relative position of the site of injury and the position of the so-called contrecoup lesions. The blow struck the head just above the right ear, whereas the two contrecoup lacerations were found on the left temporal pole and on the lower surface of the temporal lobe. These are by no means exactly opposite the site of injury, and are the usual site for contrecoup injuries whatever the site of the original violence.

My thanks are due to Professor O'Farrel and Dr. Boulgakov for their help in the preparation of the case.

ZINC GLYCO-GELATIN:

SOME OF ITS USES IN GENERAL PRACTICE.*

BY

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THE merits of zinc glyco-gelatin were first brought to the notice of the profession by Unna for its efficacy in the treatment of dry forms of eczema, but, as far as I am aware, this plastic amalgam has not yet received a place in the equipment of the general practitioner, and it is the contemplation of this anomaly in the usual custom and fashion of the profession that induces me to bring to your notice the result of my experience of its use, now extending over twenty years, in other conditions which are met with in everyday practice—such as arthritis, dermatitis, erysipelas, erythema nodosum and simplex, myositis, periostitis, phlebitis, and varix of the leg, synovitis, "tennis leg," minor thrombosis, contusions, and sprains of the joints of the limbs, to mention the chief.

The amalgam employed in these cases is composed of oxide of zinc 1 part, gelatin 2 parts, glycerin 3 parts, and water 4 parts, prepared and compounded by a skilled pharmacist. When once the principle of the rationale has been grasped the selection of cases becomes comparatively easy, but it should also be realized that, as so much of the after-success depends upon the care devoted to technique, the task should not be undertaken in a perfunctory fashion. By way of illustrating what these injunctions imply, take the condition of a leg (by far the more common part) requiring a dressing. The following outline of directions, which, in principle, apply to all cases, naturally falls under two headings—preparation and application.

Preparation.

1. If necessary, previously instruct the patient to remain in bed for such a time as is likely to allow oedema to subside to a minimum.
2. Set the process of melting the solid amalgam going.
3. Thoroughly sponge the surface extent with methylated or rectified spirit twice or thrice over, to remove fatty excretions and loose epithelium.
4. Dredge the surface well with a dusting powder composed of calomel one part and starch four parts, using the palm of the disengaged hand to rub it uniformly all over.
5. Select an open-weave bandage (texture used throughout) of an appropriate width, and cut it into a sufficient number of strands to encircle the leg from the ankle to the knee-joint, due provision being made (in the form of a "many tail" arrangement) for allowing each strand to overlap the other, by half of its width, and, at its junction in front, the ends to overlap one another by two inches, in the series of their implacement from below upwards.

Application.

As the paste, when spread, cools and sets quickly, it is advisable to apply the *immediate* part of the dressing in two sections—namely, lower, from the upper border of the ankle-joint to the commencement of the calf; and upper, from the junction of the calf to within half an inch of the knee-joint.

1. With a brush, as rapidly as possible, apply a coating of the paste over the lower section, but leaving the flexure of the

ankle-joint free, by demarcating the lower boundary of the painted extent along the upper border of the joint, from a middle point in front, outwards and downwards, on each side, including both malleoli, to short of the plantar border of the heel, then continued posteriorly to meet at a point just above the insertion of the tendo Achillis.

2. Apply the strands in their "many tail" order over the painted extent, due tension the while being maintained by the hands between the ends so as to secure uniform and even apposition of the fabric to the surface.

3. Over the implaced strands run a single length of a continuous bandage, avoiding "reverses" here (which at no stage should ever be plied over the crest of the tibia); if uniformity cannot otherwise be secured, then cut the length, fix the free end down with a daub of the paste, and encircle anew, and thereafter firmly pass the hands, one on each side, over the bandaging, in a series of semicircular sweeps from below upwards.

4. Repeat 1, 2, and 3, on the upper section, which completes the application of the *immediate* part of the dressing.

5. Rapidly apply a second coating of the paste over the *whole* bandaged extent.

6. Over this run a second bandage, but applied in the opposite direction to the first, the hands being used as before; thereafter ("reverses" on either side being now permissible) run a third and a fourth bandage in alternate directions, the hands being used in the same way, which completes the affixation of the zinc glyco-gelatin dressing.

7. Finally, encompass the foot, from behind the toes, and the ankle with a bandage, in the usual fashion, which finishes the complement of the whole appliance.

While the surface should be unbreached and free from exudations, yet dry incrustations firmly adhering to the skin, which maceration with spirit has failed to detach, should offer no barrier to the choice of selection of cases. Except for the purpose of treatment, flexures of joints, which come into play, should not be included in the immediate dressing. In the case of the ankle-joint the same purpose is equally well served by the method of No. 7, which possesses the inestimable advantage over the orthodox instructions of permitting the bandage to be renewed as often as hygienic attention to the foot may demand, without impairing efficiency.

As a rule, first and second dressings should last from three to six months, and, on an average, third and subsequent dressings should remain serviceable from nine to ten months, or even longer. Fortified with this appliance, in about 95 per cent. of leg cases patients are enabled to walk about, while treatment is going on, in conditions of (a) subacute and chronic varix, immediately; (b) dermatitis, erysipelas, erythema nodosum, and periostitis, within a week; and (c) arthritis, myositis, phlebitis, synovitis, and minor thrombosis, within a fortnight—respectively after the affixation of the dressings. On a minimum enumeration of the records traceable, over seventy cases belonging to the varix category, and more than forty cases of the other classifications, have been treated during the past twenty years with unqualified benefit to the patients; and I venture to claim for this method of treatment, on the average of selected cases (in addition to its outstanding merit of enabling the patient to walk about, as aforementioned), a greater measure of all-round efficiency, in the way of (1) affording the comfort of relief from pain, (2) preventing the development of complications in the affected areas, and (3) effecting a cure, or expediting the recovery, or promoting the betterment, of the morbid conditions, than could have been hitherto, or can be at present, obtained from any of the other forms of treatment known to me in the course of over forty years' experience of general practice.

A précis of one classic case may suffice to convey some idea of the changes which this appliance is capable of effecting in a morbid condition which the practitioner has hitherto regarded with a *non possumus* attitude to benefit from any form of treatment whatsoever.

Mrs. M., aged 50 years, figure short, rotund, and expansive, weight 17 st., had for twelve years been afflicted with a varicose ulcer on each leg, deeply eroded, and of diameter 3½ and 3 in. respectively. After months of ordinary treatment the ulcers healed. The case was selected—with misgivings—for zinc gelatin treatment.

Before treatment the girth of the legs, at the middle of extent of lower section, measured 12 and 11½ in. respectively; the structures were thickened and indurated, deeply brawny and tender, and the outline of the venous main and anastomotic

* Abstract of a paper read before the Eastbourne Medical Society.

branches everywhere undefinable on the inner surface of the lower section.

After treatment the girth of legs, at same mesial, measured 9½ and 9 in. respectively; the structures were soft and pliant, colour more normal and no longer tender, and outline of the same venous system easily delineated, and, with the exception of a few scattered indurated valvular pouches, the lumen of the vessels appeared to be more or less patent throughout the lower section of both legs; while over the sites of former ulceration extensions of vascular branches are plainly discernible injecting the waxy white cicatricial coverings with fine arterioles and network of venules from around their marginal borders.

These, then, comprise the salient features of the comparative changes which had been effected, in this instance, by means of a renewal of the dressings, on an average of once in ten months, for close on seven years, when the dressings were tentatively discarded in favour of ordinary roller bandaging support, which the patient continuously wore, in her household work, during the remaining thirteen years of her life, without any threat of recurrent ulceration or sign of varicose stagnation in the interval.

I think we have ample evidence here suggestive of the

appliance being no ordinary implement of a mechanical contrivance, and that the amalgam is potential of some therapeutical virtue the unusual results in this instance would seem to imply. And what has been accomplished in this instance is but a replica, of outstanding dimensions, of the imprimatur of restorative benefactions conferred upon the recipients in each of the other sixty-nine cases of more or less chronic varix. And what is true of chronic cases equally applies to those of the acute and subacute classifications; and I know of no other form of treatment which gives such speedy relief to the agony of the victim of "tennis leg" as the envelopment of the limb in a glyco-gelatin dressing.

Whatever may be the explanation of its rationale of action, if it were only for its *par excellence* efficiency in chronic varix and acute phlebitis of the leg (whereas in the former it stands alone, and in the latter it has no compeer, as far as known, in present-day therapy) the zinc glyco-gelatin appliance should merit an abiding place in the armamentarium of every well equipped general practitioner.

A NOTE ON TWO CASES OF A FOREIGN BODY IN THE URINARY BLADDER.

BY

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THE two cases here recorded are of interest as they illustrate some of the complications which may result from the presence of a foreign body in the bladder.

CASE I.—Perforation of Bladder Wall: Haematuria: Perivesical Abscess.

The patient, a girl aged 19, was admitted to the London Hospital under Dr. Cecil Wall, who kindly referred her to me. She stated that she was quite well and free from symptoms until five days previously, when she noticed that the urine was deeply stained with blood. The haematuria persisted until her admission to hospital. She also complained of pain and tenderness in the left iliac fossa, and slight pain on micturition in the hypogastrium and urethra. She said that the frequency of micturition was not increased.

For the first two nights after admission her temperature was raised to 99.2° and 100°, but subsequently became normal.

On abdominal examination a hard, tender fixed lump was felt in the left iliac fossa immediately above the inner half of Poupart's ligament. A skiagram showed a rod-shaped body lying transversely in the bladder, and projecting beyond the brim of the true pelvis on the left side. Cystoscopy confirmed the skiagram, and the foreign body was recognized as a penholder, painted with blue and red stripes, and encrusted with phosphates. There was oedematous cystitis on either side where it was in contact with the bladder wall. The urine was deeply stained with blood.

Suprapubic cystotomy was performed and the penholder removed. It was 13 cm. long, made of wood, and was firmly fixed. On the left side it had perforated the bladder wall, and its point extended into the indurated swelling above Poupart's ligament. The swelling was incised, and a small amount of pus escaped. The bladder and abscess were drained. The wound healed rapidly, and the patient passed all her urine naturally on the tenth day after operation.

CASE II.—Large Vesical Calculus: Incontinence.

The patient, a single woman, aged 59, was brought to the cystoscopy department of the London Hospital on June 27th, 1924, complaining of incontinence of urine. She had been perfectly well until June, 1923, when she found that she could not control her bladder, and had great frequency of micturition. She wetted her bed at night and her clothes by day. This gradually became worse, until the urine dripped away continuously. She was given a portable urinal, but it was not satisfactory, so that she seldom went outside the house. During the last six months she had lost

a great deal of weight and strength, and had suffered considerably from thirst and a dry mouth. The bowels were constipated, with occasional attacks of diarrhoea. Her urine had been thick and offensive for some time, but there had been no haematuria.

The patient was a thin, wasted, rather excitable woman. She was somewhat unstable mentally, for she had unaccountable fits of giggling, and was very vague as to the history of her illness. Her friends stated that she had "always been a bit queer." The tongue was dry and furred.

Abdominal examination revealed a round, hard mass immediately above the pubes. This mass was also felt through the anterior wall of the rectum. Examination of the external genitals showed great hypertrophy of the labia minora. The urine was alkaline and extremely offensive; it contained a thick white deposit of pus and phosphates, and one-third volume of albumin. Clinical examination was otherwise negative. The systolic blood pressure was 104 mm. of mercury, the diastolic 70 mm.

Skiagrams of the pelvis showed a large calculus in the region of the bladder, with a long narrow shadow of greater density running through it transversely.

Operation.

On July 1st, 1924, suprapubic cystotomy was performed. The bladder was adherent to the wall of the pelvis on either side and anteriorly to the back of the pubes, while superiorly the peritoneum was stripped off with great difficulty. The bladder was entirely occupied by a phosphatic calculus surrounding the foreign body. The stone crumbled under the fingers, and was removed piecemeal. The foreign body was wedged firmly across the bladder, and could not be removed until the bladder incision had been extended laterally to the right.

On examination of the empty bladder a pouch was found on either lateral wall, corresponding to the extremities of the foreign body. Two drainage tubes were placed in the bladder,

one for irrigation and the other for drainage, and the bladder wall was closed round them with catgut. A glove drain was placed in the cave of Retzius.

The accompanying figure shows the foreign body and the fragments of the stone. The foreign body proved to be an ivory penholder, 9.6 cm. long and 0.55 cm. in diameter. The fragments of stone weighed 44.1 grams and the foreign body 6 grams, so that the total weight was rather more than 1½ ounces. The stone was composed of calcium phosphate with a trace of oxalate.

Convalescence was slow but uneventful, and the patient was finally discharged from hospital on August 12th, six weeks after the operation, with the wound healed.

On September 26th she came back with a history of occasional leakage through the suprapubic wound. The wound, however, appeared to be soundly healed, and she was discharged after six days.

On October 24th she was seen again in the cystoscopy department, feeling and looking very well. She could walk about well, and had perfect control over her bladder. She was able to go all night without passing urine, and the average interval between the acts of micturition during the day was four hours. The bladder capacity was 6 ounces.