very slightly depressing action on the patient. The vomiting once and for all completely ceased. The temperature was normal next morning, and only once again, on the third day and for a few hours, rose to 101° . On the second day (December 21st) there was a suspicion of the passage of flatus; on December 22nd, a certainty of it; on December 24th, the tongue became moist, and the bowels were opened at 3 P.M. and 4 P.M. The first motion, about 4 ounces, was similar to the vomit, the second consisted of mucus. Shortly following the evacuation there were sharp abdominal pains, and the tongue became a little dry. From this time on the bowels were frequently opened, and the patient rapidly got well.

There are a few points of interest to which I would wish to allude. 1. The operation was performed on the twelfth day of obstruction and during considerable abdominal distension. I have often expressed an opinion that it is useless and dangerous to hunt for obstruction while peritonitis and distended gut are present, and that the indications are best met by a carefully performed enterostomy; opening of course a distended coil. The empty condition of the cæcum, however, together with the collapsed small intestine, pointed to obstruction high up—a condition ill-suited for enterostomy. Again, although the obstruction was high up, faecal vomiting did not appear for eight days, and this suggested that probably the obstruction, very incomplete at first, became more complete by distension from above, and that had care been exercised early the symptoms might have continued, as they had begun, to abate.

This opinion is fortified by the fact that the pain she complained of during exercise and hurry was over the neighbourhood of the band, and that probably her frequent so-called bilious attacks emanated from the same source. Amongst the causes which deprive an early obstruction of a fair chance, next to cathartics, should be placed enemata, which, as Niemeyer pointed out years ago, induce peristalsis above as well as below the seat of obstruction.

There was another symptom in this case which interested me, and that was the sharp abdominal pain which followed shortly after the anal evacuation. I have frequently observed this before. In one case, which was being treated expectantly, the patient died on the twentieth day, four hours after the relief of obstruction, having endured sharp abdominal twinges. In another case after the relief of a very simple hernia, an evacuation of bowel took place, followed by collapse and death.

FORMIC ALDEHYDE AS A RAPID HARDENING REAGENT FOR ANIMAL TISSUES.

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In the busy life of the present day the saving of time in all parts of medical work is of the utmost importance, and this is especially so in regard to microscopic pathology. Too often a portion of tissue, removed either for diagnosis or in the way of treatment, is never thoroughly examined on account of the inordinate length of time which the processes of hardening, cutting, staining, and mounting will require. Fresh sections of tissues are difficult to prepare, and often decidedly unsatisfactory. Of the various fluids in use for hardening animal tissues before section, two are commonly employed—namely, alcohol and chromic acid. Absolute alcohol hardens most tissues in some four or five days, but has the great disadvantage of being apt to render them brittle, or to harden them very unequally. Methylated spirit will take a fortnight or more to produce a satisfactory result. Chromic acid is generally used as potassium bichromate in solution, with some sodium sulphate in the well known Müller's fluid. Wherever the sulphate penetrates—and it has great power in this direction—the chromic salt will follow, and harden the tissue extremely well; but the process requires an inconvenient length of time—in fact, often as long as six weeks, and with many renewals of the reagents. Pure chromic acid, or chromic acid with spirit, hardens in about a week, but again is liable to make the tissue brittle. Perchloride of mercury interferes much with staining, though it hardens rapidly. Thus any reagent

which tends to shorten this period of time, and yet produce satisfactory results, is to be welcomed.

Experimenting in some other ways with formic aldehyde, I was much struck by its extremely powerful and rapid hardening effect. I therefore determined to test its action upon tissues, especially very soft varieties of normal and pathological structures, just indeed those most difficult to prepare for section. Normal cerebellum, testis, lung, thymus gland, and ciliated epithelium of the trachea all hardened well in three days when immersed in a 20 per cent. solution of the aldehyde, though for the testis and lung a 40 per cent. strength is the better. None of the tissues became brittle, but all were easily cut after soaking in gum with an ether-freezing microtome, and all stained well with logwood, and some with logwood and eosine. None of the cells of the various specimens were altered in shape or character.

Of pathological tissues, a very soft round-celled sarcoma from the head, an adenoma of the thyroid gland, and some emphysematous lung were treated with a 40 per cent. solution, and all were sufficiently firm in forty-eight hours for cutting; and again all the sections took the ordinary stains well. The lung tissue was, however, somewhat brittle. Compact growths, such as scirrhus or renal tissue, require only a 10 per cent. solution for twenty-four hours.

I am thus led to think formic aldehyde in 40 per cent. solution for very soft tissues, in 20 per cent. for firmer, and 10 per cent. for quite firm material, acts as a most rapid and satisfactory hardening reagent. It does not render any tissue brittle in the way spirit does, and in no way prevents a stain acting well on the sections. It is therefore a useful adjunct in pathological and histological work.

A CASE OF HYDATIDS OF FEMUR IN THE SITE OF FRACTURE:

WITH REMARKS ON THE METHOD OF AMPUTATION THROUGH THE HIP-JOINT.

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Previous History.—A. B., a Pathan, male, aged 25, was admitted to the Mission Hospital, Quetta, in March, 1893, suffering from a fracture of the shaft of the right femur at the junction of the upper with the middle thirds of the bone. The history he gave was that a year before his admission to hospital he was knocked down by a horse, and had his right thigh fractured. He was laid up with this for six months, but after this time was able to get about again. Four months before coming to hospital the thigh fractured spontaneously at the same place, and a swelling began to form at the site of fracture.

Condition on Admission.—The patient was very emaciated and weak, the very slightest movement causing him severe agony. A round fluctuating tumour separated the ends of the fractured bone. The hypodermic syringe gave only negative evidence. The patient was suffering from hectic, and could only take fluid nourishment.

Exploratory Operation.—Two days after admission a small incision was made into the tumour, which revealed the presence of hydatids, and by slightly increasing this a large number of daughter cysts were evacuated. On further examination of the fractured ends it was found that the whole shaft of the femur was involved by these organisms, and it was proved beyond all doubt that the only thing that could save the patient would be amputation through the hip-joint. Although this operation was so slight, yet owing to the weak condition of the patient he nearly died on the table. After six weeks' careful nursing and feeding, I thought that the condition of the patient had so far improved that amputation might be performed without serious risk. However, the next day he was not so well, and I concluded that death on the table could only follow.

Amputation through the Hip-joint.—A few days after this I undertook to operate at the patient's earnest request, adopting the following precautions, which I think will be of interest to many. The use of skewers in amputation through the hip-