which was about the size of a thick goose quill. The ligature was carried around it in the same manner as in the case of the other vessels. While ligaturing the third group, the silk broke, wounding a small artery. In a moment, a hæmatoma was formed by the blood effused into the peritoneal layer around the vessels. I now tied the vessel further from the spleen, and stopped all bleeding completely. I next cut through the vessels and took away the spleen. Although the bleeding had ceased, I surrounded the vessels with a thick silk ligature, and fastened the whole once more. After this, there was no bleeding whatever. After cleaning off the effused blood, I dropped the pedicle, which had commenced to swell most fearfully, back into the cavity. This being quite clean, I closed the abdominal walls and covered the wound with antiseptic dressing. Twenty-eight minutes after the operation was commenced, the patient awoke in her bed feeling quite comfortable.

The removed organ was only a little larger and heavier than normal; it was densely covered with star-like old and recent superficial cicatrices of perisplenic inflammation. The parenchyma itself was not changed, nor was the blood the vessels contained pathologically changed.

The patient recovered without any febrile reaction. Being accustomed to the use of morphia, she received, during the first three days, several doses *per diem*. For the first day, she took only small pieces of ice. On the second day, the bowels began to act spontaneously; then she had beef-tea and wine. On the fifth day, she felt so well that, during the momentary absence of the nurse, she left her bed to look out of the window. On the fourth day, the bandages were changed under carbolic spray, the wound having healed almost completely *per primam intentionem*. On the ninth day, she felt so well that I could not detain her in bed any longer, and on the eleventh day I found her sitting in the sunlight at the door of my clinic. The patient felt extremely well; the old pains, which I believe to be caused as well by the chronic inflammation as by the tension of the peritoneum by the organ, had disappeared, nor were any functions of the body disturbed. In different preparations, I examined her blood microscopically, and sometimes in these examinations I was favoured with the kind assistance of Dr. Gravit, of Virchow's Pathological Institution; but we found no alteration of the corpuscles, either in form or behaviour, nor in their relative number, nor was the fluid changed from its state previous to the operation. During the third week, the patient suffered serious indigestion from improper food. The menses were postponed six weeks, as has frequently occurred before; and the flow was not so profuse as during the former periods. I was the more satisfied by the rapid recovery of the patient, for there thrombi were surely to be expected to form in the long splenic arteries, and I feared serious trouble therefrom. Nevertheless, no symptoms of any danger could be discovered, and three weeks after the operation the patient returned to her work, and at every opportunity hastened to show herself to those who had previously treated her.

This, gentlemen, is the case I have to report to you. It proves undoubtedly that we can exist without the spleen—that splenectomy does not change the constitution of the blood. Besides this, the case proves that, as soon as the tying of the vessels is facilitated, the operation of splenectomy will not be such a dangerous measure as it has been thought to be, and especially when it is done under the antiseptic regimen, which in Germany at this time would not be omitted in this operation.

CASE OF OSTEO-SARCOMA OF TIBIA, RECURRING IN STUMP OF THIGH, AND PROBABLY AFFECTING THE LUNG.

By JOHN EWENS, L.R.C.P., L.R.C.S.ED.,
Surgeon to the Hospital for Sick Children, Bristol.

THE BRITISH MEDICAL JOURNAL of December 29th, 1877, contains a report of osteo-sarcoma of the femur, with death from subsequent deposit in the lung, read before the annual meeting of the Association in August last, by Mr. Heath of Manchester. As the following case seems to be in some respects somewhat antagonistic to the conclusions arrived at by Mr. Heath, in connection with the opinion of the late Sir W. Fergusson, it will not, I think, be without some practical interest.

A boy, aged 8, was admitted into the Hospital for Sick Children, Bristol, in May 1876, with a large tumour of the upper extremity of the left tibia. The history given was that, some weeks before, he had been struck by a stone flung by another boy, and that he had walked some distance in the snow, and got chilled. The very rapid growth and general appearance of the tumour led to the diagnosis of malignant

disease, and that nothing but prompt amputation far beyond the limits of disease could afford the least chance of saving life. The inguinal glands, though more distinct than usual on account of the extreme emaciation, did not appear to be diseased. There was no abdominal tenderness, or evidence of any visceral disease. Amputation was performed by the circular method about the middle of the thigh. The wound was dressed with carbolic oil, and the arteries tied with carbolic catgut. Rapid union of the deep structures occurred by first intention, and the patient was discharged quite well in about a month. The whole of the upper third of the tibia was involved in the malignant growth, which also extended into the joint (but did not invade the femur) and for a considerable distance down the cancellous tissue of the bone. The soft parts were also extensively involved. Unfortunately, the hospital cards containing detailed notes as to circumference of the tumour, etc., have been lost or mislaid.

On October 14th, the boy returned with a tumour, of the size of a small orange, on the inner and anterior side of the stump, which, he said, had been growing about six weeks. It was not very painful, and was somewhat movable, and probably had deep attachments. He said it had commenced on the surface. The inguinal glands were not tender or materially enlarged. His general health was wretched; hurried respiration; quick pulse; leading me to suspect extensive disease of the lung. On examination, dulness with extensive crepitation over the whole of the posterior aspect of the chest was detected. The only question remaining was the propriety of removal of the stump at the hip-joint, but this was negated after further careful examination of the amputated limb (which is now preserved in the museum of our medical school), the femur being found free from disease; and the inference was that, as the whole of the diseased structures had been removed, the malignant cachexia was so decided as not only to reproduce the disease in the stump, but most probably the lung-affection was of a cancerous nature. He was therefore discharged, and lived about a month. I visited him about a week before his death, and found that the tumour had rapidly increased in size and appeared as though it would soon ulcerate; but this did not occur, and the chest-disease was the immediate cause of death. As he lived ten miles from Bristol, no *post mortem* examination could be obtained.

It appears to me that this case proves an exception to the rule laid down by Sir W. Fergusson, referred to by Mr. Heath, "that large malignant growths, springing from the long bones, do not, after amputation, if the whole of the diseased structures be removed, return in the stump, but at some distant part; and, therefore, it is not necessary to amputate above the knee in case of the tibia, or at the hip-joint in case of the femur".

Now, in the case I record, it is obvious that the disease did return in the stump—whether prior or subsequently to the lung-disease I cannot say—and that it progressed with a rapidity which would have speedily of itself proved fatal; and yet it was my own opinion, and that of my colleagues, that I operated far beyond the limits of disease then apparent. Hence it would seem to be impossible, with certainty, to promise immunity from a return of this formidable disease, whilst in suitable cases we must not hesitate to amputate.

Mr. Holmes (*Surgical Treatment of Children's Diseases*) in the course of his observations on this subject, says (second edition, page 334): "Usually, however, the case proceeds very differently; the malignant deposit reappears in the course of a few weeks after removal of the limb, either in the glands or in the interior of the body."

Mr. Erichsen (*Science and Art of Surgery*, seventh edition, vol. II, page 207), in connection with this subject, says: "I believe that return is much more speedy and certain after amputation, in the peripheral than in the central form of malignant disease of bone, provided that in the latter the whole of the bone has been removed; this is due to the more extensive contamination of the soft parts in the former than in the latter case." Again, "If the limb be removed in the *continuity of the diseased bone*, there must necessarily be a great probability of a very rapid return of the morbid action in the stump; and this probability amounts to a certainty in those cases in which the disease is central, and in which the whole of the medullary canal and cancellous structure are implicated and infiltrated with cancer. In cases of peripheral disease, this return in the same bone may not take place"; but, as there can be little certainty about the matter before operation, he advises removal at or above the next joint. Further on, he observes: "In some forms of malignant bone-disease, however, the muscles inserted into the affected bone often become speedily contaminated, and this contamination may spread widely through the substance or along the sheath of any particular muscle. Hence, I think the rule in these cases should be to amputate not only above the diseased bone, but, if practicable, above the origins of the muscles in the neighbourhood of the disease."

As the disease did not return either in the glands or the bone, and the site of the recurrent tumour corresponded to the cut end of the sartorius, it appears to me to be an example of that form described by Mr. Erichsen, of infiltration of this muscle spreading upwards from its tibial insertion. Of course, his suggestion to amputate "above the origins of the muscles in the neighbourhood of the disease" could not in this case be adopted. It is very unfortunate that no *post mortem* examination could be obtained, as it would have cleared up any ambiguity as to the condition of the internal organs and the exact relation to the bone of the tumour in the thigh.

THERAPEUTIC MEMORANDA.

THERAPEUTIC USES OF IODOFORM.

THE experience of Mr. Berkeley Hill, related in the JOURNAL of January 26th, will, no doubt, elicit other reports on the value of iodoform. I have for a long time employed it in ulcerations of the throat, whether syphilitic or not. When it was first introduced into practice, I applied the crystals to such ulcers in the same way as Mr. Berkeley Hill has used them in primary affections. Finding that, in this form, too much irritation was often produced on the spot where the hard scaly crystals rested, I recommended the drug to be finely powdered, and in this form it may be applied either with a pencil or on bits of cotton-wool. Then came the recommendation to dissolve in ether, which is, in many cases, an excellent plan; but, in others, the fine powder will be found preferable.

In specific ulceration of the soft palate, pharynx, tonsils, or nasal passages, iodoform will often be most efficacious. In those indolent cases which have been believed by able observers to be scrofulous ulceration, but which some of their critics still think due to syphilis, iodoform will sometimes bring about a favourable change when the failure of other means has been most discouraging. As it is equally useful in unquestioned scrofulous conditions, the amendment cannot be used as a diagnostic aid. In ulceration which can only be detected by rhinoscopic examination, the iodoform may be applied by the assistance of the mirror. In this way, some most obstinate cases of ozena and other troubles may be cured. Some other methods of applying this drug locally will suggest themselves and have been for several years taught in my lectures.

I am glad to be able also to support Mr. Berkeley Hill with regard to the use of iodoform internally. I have not often given it in such full doses; but this is, perhaps, due to the difference in the cases in which I have prescribed it. I have very seldom seen it produce much coryza, and have not yet come across iodic acne thus excited. My most usual pill contains one grain of iodoform made up with extract of taraxacum or sarsaparilla.

It should be remembered that, in using any drug in the fauces and nares, a large portion is carried to the stomach; on which account, when applying it freely in these situations, I have not thought it necessary to give pills at the same time.

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NOTE ON IODOFORMED WOOL.

THE remarks of Mr. Berkeley Hill, in the JOURNAL of January 26th, on the "Therapeutic Use of Iodoform", suggest some further applications of this drug than the scope of his observations embraces. It is more especially in diseases of the nose and postnasal region that the proved curative influence of iodoform requires to be more extensively known. In cases of rhinitis, ozena, postnasal catarrh, and hyperplastic deposits, whether simple or syphilitic, iodoform exercises quite a specific influence. As regards the best method of using it topically in these sensitive regions, the objection to the ethereal solution is its extreme painfulness. This defect—a very serious one in the case of delicate females—is due entirely to the solvent employed, iodoform itself having a distinctly anodyne influence on the tissues to which it is applied. Allowing the ether to evaporate somewhat from the sponge or brush employed modifies this unpleasant effect; but even then I have observed patients shrink from its application with expressions of the greatest dismay. I have, therefore, sought for some vehicle for iodoform which, while free from the objections due to the ether, will enable the drug to be maintained in contact with the tissues to be influenced by it. Finely carded cotton-wool appears to supply this requirement; an "iodoformed wool" has been prepared for me by Messrs. Bullock and Co., which has yielded very satisfactory results in practice. Each drachm of the wool contains a drachm of iodoform, with which it is

very intimately blended. For use, it is simply necessary to pass on a probe a small portion of the wool to that part of the nasal cavity which may be deemed necessary. Here it will remain for a period varying from one to twenty-four hours, its presence being unrecognised by the patient. A noteworthy fact about iodoform is, that, unlike most of the substitution-products of the same series, it retains the therapeutic peculiarities of the introduced element, iodine, while acquiring somewhat of the pain-allaying influence of its new associates. This circumstance opens up a wide field for its application as a remedy. From a practical point of view, it would be profitable if other readers of the JOURNAL would contribute the results of their experience of this really valuable drug. EDWARD WOAKES, M.D. Lond., Surgeon to the Hospital for Diseases of the Throat.

IODOFORM AS A LOCAL APPLICATION IN NASOPHARYNGEAL DISEASE.

THE fact that iodoform, as a remedy in syphilis, has been approved by so accurate an observer, and so competent an authority, as Mr. Berkeley Hill, induces me to recommend it to the profession as a local application in subacute and chronic catarrhal inflammations of the naso-pharynx; a most troublesome class of diseases, and one in which, according to my experience, the use of all other topical agents with which I am acquainted is followed by aggravation, more or less prolonged, of the symptoms it is intended to relieve; that is to say, arrest of the nasal secretion altogether, with consequent obstruction of the passages, or by unduly profuse nasal discharge, which only increases the already existing hyperæmia and thickening. It may be briefly stated that, in such conditions, there is congestion, with granulations, of the visible portion of the pharynx, which, by means of the rhinoscope, can be seen to extend into the naso-pharynx. On anterior examination of the nostrils, so much of the turbinated bones as can be seen will be observed red and swollen; the lower one especially is often so thickened, that nasal respiration is considerably impeded. If, as is frequent, deafness coexist, it will, on this account, be very difficult to pass an Eustachian catheter, and it is quite common for this swelling to be mistaken for a new growth.

Iodoform may be applied in two ways: first, as an ethereal solution (one part of iodoform to ten or twelve of common ether), with a brush or on a piece of sponge or cotton-wool in a suitable holder. The application should be made first to the throat, passing the brush up behind the uvula, and then very thoroughly by another instrument up each nostril. This procedure may, if the mucus be inspissated, be preceded by use of the posterior nasal douche. The only pain is that due to the discomfort of introduction of a foreign body into sensitive passages and to the evaporation of the ether. In any case, the smarting is but momentary. After the application, which should be repeated twice or thrice a week, the mucous membrane will be noticed to be much paler in colour, and to be covered by a thin film of the iodoform. After about six repetitions, the swelling will be found to have much decreased. The second method of using iodoform to these parts is one which may be pursued by the patient; namely, mixed with vaseline and applied with a small brush far up each nostril. This can be done night and morning, or on the alternate days of the stronger application. The form that I employ is five to eight grains of iodoform (with sufficient ether to dissolve it) to one ounce of vaseline.

For the valuable suggestion to use this remedy I am indebted to Dr. R. C. Brandeis of Louisville (at present in this country), who was first led to employ it from observation of its good effects in catarrhal affections of a somewhat analogous nature in the vagina and uterus. It has also been on constant trial by my colleagues at the Central Throat and Ear Hospital for now nearly six months, and I have no doubt that others who try it will hold it in equally high esteem.

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ON THE USE OF KOUMISS AS A THERAPEUTIC AGENT.

THE remarks of Dr. Lowther in the JOURNAL of January 19th, and the cases mentioned by him, well illustrate the value of koumiss as a remedial agent, and as a form of nourishment almost certain to be assimilated in what otherwise might be considered to be, perhaps, hopeless cases. In phthisis, in the early stages, where capriciousness of appetite or disinclination for any food is a prominent symptom, as also in the laryngeal form of the disease, we possess in koumiss an agreeable and efficacious form of nourishment. In cancer of the stomach or rectum, in the vomiting of pregnancy, in mesenteric disease, in affections of the throat accompanied by dysphagia, in gastric catarrh or