the excised portions; that continuous sutures were employed; and that catgut was used instead of silk. The mucous membrane was also left unstitched. While clamps are strongly recommended by Kocher and other surgeons, and while I might not hesitate to employ them where there was difficulty in approximating the incised portion of intestine, I think I have seen paralysis, with consequent delay in healing, induced by their use. That the continuous suture is alone permissible I have no doubt whatever, as it is rapidly applied, and is much more likely to induce perfect approximation than the interrupted. I used the ordinary catgut, which I have always prepared, to resist the action of the tissues for three weeks, and I am of opinion that leakage from stitch abscess is less likely to follow with gut than with silk.

In conclusion, I would suggest that rapidity of operation—in this case sixty minutes—contributes enormously towards a successful result. This is another advantage of the continuous stitch. The diminution of shock by a rapid operation, with the small amount of chloroform absorbed, renders the patient less liable to post-operative sickness and its attendant complications.

VALERIANATE OF ZINC IN HAY FEVER.

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THE following notes of a case of typical hay fever, in which the administration of valerianate of zinc was followed by a cure, to all intents and purposes, may prove interesting.

The patient, a strong, healthy young man, aged 32, a chartered accountant and stockbroker, consulted me early in 1893, when I learned that he first suffered from symptoms of the disease when he was 16 years of age, and that ever since then he had suffered regularly every summer, with greater or less severity according to the weather. The attacks began about the middle of June, and lasted about three weeks or a month, the duration of the seizures depending on the dryness of the summer. The patient, a most intelligent and observant man, has studied the whole matter very thoroughly, and is of opinion that the cause of the trouble in his own case is the emanations from grasses, and especially hay, when seeding.

Sometimes the attacks were so severe as to incapacitate him for business, and to necessitate confinement within doors. When at the seaside or in town there were never any symptoms or signs of the disease. He has two business offices, one in a large commercial city in Scotland, and the other in a large town some seven miles distant. Between these two places he has to travel at least twice a day. The country through which the railway runs consists mainly of fields, many of which in summer time contain hay, grasses, etc. It has frequently happened that he has left one station feeling perfectly well, but has had an attack in the train when passing the fields, which has disappeared when he reached the other station.

Unfortunately, I have never had an opportunity of examining this patient's throat and nose. Prior to the employment of the treatment I suggested, the only remedies used were local. These sometimes relieved the symptoms, but only for a very short time. Several medical men were consulted, and they advised him to be near the sea during the usual time of the attack. No internal medication was advised.

There is a history of nervous affections in the family, and the patient himself is distinctly neurotic. It was this which led me to prescribe valerianate of zinc as a nerve tonic to "brace up" an unstable nervous system.

Early in 1893, I prescribed for my patient as follows: 1. Valerianate of zinc pills, 3 grains in each; one pill to be taken three times a day after meals; to be commenced a full month before the onset of the attack was expected, and to be continued for at least a month after the usual time of onset. 2. As local palliative measures, if required: (a) a 5 per cent. watery solution of hydrochlorate of cocaine, to be used as a spray to the nose and throat; and (b) a snuff composed of bismuth, morphine, etc.

In the summer of 1893 he wrote: "I took the pills but I also kept at the seaside during the time I usually had the trouble, so I could not say positively whether it was due to

your prescription or to the precaution I took of being near the sea that I had almost no hay fever."

On August 20th, 1894, he wrote thus: "I promised to let you know how I fared this summer with my annual enemy, hay fever. I took the pills as directed and used no other remedy whatever, with the result that I had scarcely even an indication of the disease. This year I did not go near the seaside, and the result has been as I have stated. This leaves no doubt in my mind that the pills are a positive preventive of the disease, at least so far as I am concerned."

I received another letter from him on July 24th, 1895, from which I quote the following: "I am very glad to be able to report that I had almost no trouble with the hay fever fiend this summer. Only one day for an hour or so I had some of the symptoms. You must remember, too, that this summer has been a specially trying one for those troubled with the disease, the hot dry weather favouring a development of the symptoms. There is no doubt whatever that the pills are a certain preventive" (in this particular case).

A BULLOUS ERUPTION FOLLOWING THE ADMINISTRATION OF ARSENIC.

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A LADY, aged 48, rather delicate and anæmic, consulted me on May 14th, 1894, on account of sacral pain and debility. I prescribed a mixture containing ferri et ammon. cit. gr. vii, liq. arsen. $\mathfrak{m}$ v, potass. iodid. gr. vi, sp. chloroform. $\mathfrak{m}$ v, to be taken three times a day.

On May 21st I was called to visit her on account of an eruption on her hands. There was some general œdema of both hands, with redness; and on the palms and fingers were numerous small deeply imbedded vesicles. The eruption was preceded by, and associated with, sensations of irritation and tingling, which became almost intolerable, and prevented sleep. The first symptom had been noticed two days before I visited her, that is, four days after commencing to take the mixture above mentioned. During the next week the vesicles enlarged and coalesced, forming bullæ, some of them three-quarters of an inch in diameter. Some of these ruptured spontaneously; others were opened with scissors; the contents of the vesicles and bullæ never became purulent, but consisted of an almost clear serous fluid. In the course of about three weeks the skin of the parts affected was exfoliated or cut off. The new red skin was dry from the first, never discharging like an eczematous surface. The patient was completely unable to use the hands for nearly a month, but at the end of that time they were practically well, except for slight tenderness and stiffness. The eruption affected the whole palmar surface of both hands; and the fingers were affected on the dorsal surface of the last two phalanges, as well as on their sides and their whole palmar surfaces.

When first consulted about this eruption I considered the question of its possible causation by the arsenic or iodide which had been given. The definite and limited symmetrical distribution of the lesion seemed against this view of the case. Moreover, there was the history of an exactly similar eruption about two years previously, which was attributed to anæmia, etc. Thus I came to the conclusion that the drugs given could not have caused this attack. I had never seen any eruption like it; but on consulting Crocker's *Diseases of the Skin* it appeared to me that the rare disease described there under the name of "pompholyx" corresponded in almost every particular with the appearances observed. The character and distribution of the eruption, and further, the fact of recurrence, were all in agreement with the view that the case was to be placed under this heading. Accordingly I diagnosed the case as one of pompholyx, and ventured to predict to my patient that the attack would probably recur.

On March 27th, 1895, I prescribed for the same patient a mixture containing liq. arsen. $\mathfrak{m}$ iij, potass. iodid. gr. v, sp. chloroform. $\mathfrak{m}$ iv, to be taken three times a day. She was then convalescent after an attack of typhilitis, and was complaining of shifting "rheumatic" pains. Four days later I was again called to see her on account of a similar attack to the one already described. The hands were in precisely the same

condition as before; the eruption ran the same course; and, with the exception that the attack was less severe, it corresponded in every particular with the former one which I had seen. This was therefore the third such attack from which the patient had suffered. On the first occasion the patient was under the care of Dr. Herbert Osborne, of Vredefort, O.F.S., who has kindly furnished me with the following particulars in regard to it: The eruption then commenced three or four days after the patient began to take a tonic mixture containing iron and liq. arsen. mij thrice daily. The eruption corresponded exactly with my description of the subsequent ones; he had considered it was not due to the drug on account of the local and limited distribution, but was unable to find any adequate local cause.

It appears certain that the eruption was caused by the arsenic prescribed, as on all three occasions the onset occurred from two to four days after commencing to take small doses of that drug.

There are two points in the case which appear specially worthy of note. In the first place, the distribution of the eruption did not vary, and was definitely localised, being limited to the hands in each of the three attacks, and leaving the dorsal surface for the most part unaffected. This striking local distribution of the eruption naturally led us off the scent in coming to a right diagnosis. In the second place, the eruption agrees almost exactly with the rare disease known as "pompholyx." The only point of difference appears to be that in this case many of the bullæ ruptured spontaneously, whereas it is stated that in cases of pompholyx this never happens; but as regards distribution and character of the eruption, the resemblance is otherwise complete and striking. Herpes zoster is known to have been caused by arsenic in numerous instances. This case seems to resemble pompholyx so closely that I would suggest it is to be regarded as a case of that disease caused by arsenic. In this light the case also acquires a further interest, as indicating that pompholyx may, like herpes zoster, be as Crocker suggests, "primarily of neurotic origin, probably a vasomotor neurosis." The intense feelings of irritation felt at the time of the appearance of the eruptions may perhaps be regarded also as favouring this view.

ON MEDIASTINAL FRICTION; WITH NOTES OF A PECULIAR CASE.

By JAMES ADAM, M.A., M.B.,
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THE following remarkable case of mediastinal friction, with peculiar sounds evoked by change of posture, is even more striking than that of Drs. Perez and Harris.¹ The patient, a well-built, somewhat spare, man, aged 26, has always been in good health except as stated below. In October, 1892, while reaching his right hand up to a shelf, he felt sudden pain about the heart. He was laid up four days. In November, 1893, when I first saw him, he suddenly had similar pain, and lay up a week, when it gradually ceased. For the first two days the temperature was about 101° , and respiratory murmur was almost inaudible over the left chest, but no other abnormal sign was found. In a fortnight he returned to work feeling quite well, though the chest condition was the same.

On April 21st, 1895, while dancing, he was suddenly seized with pain, at first along the sternum, but soon passing toward and settling around the left nipple. He at once went to bed, applied a fly blister, and got relief, though slight pain continued for a day, and recurred whenever he lay long on the left side. He had no dyspnoea, cough, or expectoration, and felt well but for the pain. The temperature and pulse were normal. The left chest moved on respiration, but no air seemed to enter; there was no respiratory murmur or vocal fremitus, little vocal resonance, no *râle*, bell sound, or echo. The girth of the chest was the same on each side. Heart dulness was absent, but the sounds distinct and pure.

On the second day of the illness he first noticed an extraordinary symptom. When he lay on the left side severe pain at the left nipple returned, and a double sound accompanying the

systole and diastole of heart was audible to bystanders several feet from him. This sound, he aptly likened to the double sound produced when you quickly dimple a rubber ball and let it rebound, or do the same with a felt hat. It had a loud, hollow ring. Examination in various postures then revealed great variation in physical signs of the left chest; the right remaining normal.

PHYSICAL SIGNS.

I. *Patient Supine.*—A slightly hyper-resonant note was obtained over the front and side right down to the stomach note at the sixth rib. Breath sounds absent; no abnormal sound. Vocal fremitus absent, vocal resonance nearly so. Heart dulness absent, sounds pure.

II. *Lying on Right Side.*—The same as in I; feeble respiratory murmur at left base.

III. *Sitting.*—Lung as in I and II. Cardiac dulness can be detected at fifth rib. When patient leans slightly back a soft blowing murmur follows second heart sound, and sometimes also the first. To this is sometimes added a harsh, rasping, and evidently friction, noise coming after the second sound; occasionally it followed both sounds, being then heard along with the blowing murmur. These murmurs are heard all over the normal cardiac area, but most distinctly along the sternum. They vanish when patient leans forward. They were never heard after the third day of illness.

IV. *Lying on Left Side.*—This position gave surprising results. Air was now heard entering lung freely, with slight prolongation of expiratory murmur below clavicle. Vocal resonance and vocal fremitus became normal. Behind, the physical signs were normal, except for slight diminution of respiratory murmur at apex. Heart dulness could now be percussed of normal size, slightly displaced to left, the apex beat being easily felt an inch outside nipple in fifth space. In this position the rhythmic double sound accompanying the heart beat and audible to bystanders was heard. It was not constant, being most readily evoked when, with the patient semiprone, one's fingers were pressed on the cardiac apex, where it seemed to be produced. It vanished when the patient turned a little off the semiprone position, but air still entered lung freely till he rolled on to his back. This sound was not heard after the tenth day. The pain at the nipple recurred when he lay long on left side or when he exerted himself.

In a few days he went to the country, and returned on May 3rd feeling well. Air then entered the lung freely in all positions; the only abnormal signs were slight hyper-resonance of the percussion note, which was clear down to fourth rib, slightly diminished fremitus, and when he lay on left side the apex beat, previously inside the nipple, fell to one inch outside, and pulsation could be seen in the third and fourth spaces. At the present date no difference from the normal is found, even when arms are raised.

The case excited the interest of several doctors to whom it was shown; none of them had heard such sounds as those described. It is difficult to account for the mobility of the heart on any supposition but that of a slight pneumothorax; yet the patient, till the onset of the illness, had no complaint whatever, and has never had cough or expectoration. Possibly he has an undue tendency to rupture his air vesicles while holding his breath, and thus pneumothorax might be caused. There was no subcutaneous emphysema. In all positions but that on the left side the heart fell back, and the left bronchus was nipped either by the large vessels at the base of the heart passing in front of the bronchus, or by adhesions in the mediastinum. The double borborygmous sound, like magnified heart sounds, was certainly caused by the action of the systole and diastole on an air-containing space, possibly by the heart pulling on adhesions between the pericardium and bronchus, or by the alternate expulsion of air from, and return of it to, the area between the pericardium and the chest wall.

NOTE ON THE THERAPEUTIC USES OF CELLOIDIN.

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Most medical men who work practically at pathological histology will be well acquainted with the value of celloidin as an embedding agent, and many will have been annoyed at the tenacity with which it adheres to the skin, if a few drops of a solution be allowed to dry on the fingers. It was this fact which suggested to me the use of celloidin in medical practice, and for several years I have employed it, and have found it of service in many ways. No doubt others will have employed it also. I recommended it to my friend Dr. Mackenzie some time ago as a permanent dry coating for wounds, when the edges can be brought well together, and I

¹ BRITISH MEDICAL JOURNAL, January 11th and 25th, 1896.