

results hitherto attained by surgical intervention in a large majority of the cases of spinal tumour that have been submitted to such treatment. In ten, perhaps twelve, of these cases the operation, it is stated, seems to have hastened death; in nine cases, the surgical treatment made little difference in the progress of the case. In ten cases the operative treatment is reported to have led to recovery; but in two of these cases, according to the authors, the records are not sufficiently perfect to allow of verification of the statement. The first case reported by the authors is one of a distinct and easily removable intradural fibroma in the lower part of the dorsal region. The patient, it is stated, though greatly improved after the operation, and able to walk slowly without the aid of a stick, and free from any considerable pain, is yet far from well. In the other two cases, although the disease, which was malignant, involved the cord itself, and could not be removed, operative treatment, it is asserted, was followed by relief of pain and general improvement. At the end of their paper, however, the authors state that with regard to the favourable results which followed surgical treatment in these two cases it would be hazardous to assert that they were so clearly attributable to the operation as to justify repetition of the procedure in similar cases.

**The Value of the Different Methods of Bowel Union.**—By Prof Chlumsky, *Centrablatt für Chirurgie (Therapeutic Gazette, October 1899)*.—The *Therapeutic Gazette* quotes Fowler's abstract (*Annals of Surgery, July 1899*) of Chlumsky's paper. The experimental work was done on dogs and human cadavers. The tests applied were those of hygrometric pressure.

In the human bowel the intact intestinal wall alongside of the anastomosis was torn earlier than the site of the anastomosis itself. Recent intestinal unions in dogs, applied in the living animal and examined at once, appeared to be less resistant than those in the bowel of the dead dog.

The firmness of the intestinal anastomosis applied in the living dog diminished continuously for the first four days. During the first twenty-four hours it diminished only moderately, unless the peritoneal inflammation due to the operation was very severe at the site of the anastomosis and its neighbourhood (100 to 200 millimetres hygrometrically); if the loops of anastomosis were markedly reddened or otherwise considerably altered, the firmness of the anastomosis diminished surprisingly after twenty-four hours (20 to 100 millimetres hygrometrically); forty-eight hours following operation, in case of slight inflammatory reaction, the resistance was still (80 to 120 millimetres hygrometrically), and diminished still more during the next twenty-four hours. On the third and fourth twenty-four hours, the lowest resistance was regularly reached (50 to 90 millimetres hygrometrically).

On the fifth day the resistance to pressure increased (50 to 120 millimetres hygrometrically), and on the seventh day increased to the resistance of the recent anastomosis (150 to 340 millimetres hygrometrically). Twenty-four days following, the original resistance was increased (250 to 350 millimetres hygrometrically).

Ten days following operation, the intact bowel tore before the site of anastomosis gave way (height of pressure 380 to 400 millimetres hygrometrically); and on the fifteenth day in only one case did the anastomosis tear before the uninjured bowel wall. Thirty days after operation, and in one case 120 days after, the resistance of the site of anastomosis and the bowel wall was nearly equal.

At first sight it is surprising that such low pressure will tear the anastomosis between the third and fifth day. One would imagine that the solidity of the day anastomosis would steadily increase. This can be readily explained. During the first two days the parts are fixed mechanically by the suture or button. The parts gradually become infiltrated and consequently less

resistant, thus offering a less secure hold for the fixing elements. Every operator knows what small resistance most tissues possess two to five days after a trauma. In the intestinal wall the conditions are similar.

Further, anastomosis by button did not differ materially from anastomosis by suture; either was torn by approximately the same amount of pressure. In case of simple mechanical traction the anastomosis by button gave way earlier, especially when the button was cast off or absorbed before the fifth day. Attention is drawn to the fact that in certain cases in which the Murphy button was used, even in cases of recent anastomosis, while the anastomosis gave way sufficiently to allow the button to show, yet no fluid escaped for some time after. This is accounted for by the integrity of the purse-string suture fastening the intestinal wall to the button.

As a general rule, however, circular anastomosis stood a higher pressure than lateral. In recent anastomosis done by suturing, the site of rupture was almost always at the point where the knot of the continuous suture lay. This was particularly so if two knots lay together. If the continuous sutures were first tied separately and then together the perforation was always at this point.

All the anastomoses were exceedingly fragile from the third to the fifth day. In two cases, in spite of the greatest care, the anastomosis was torn before the manometer examination. Adhesions to neighbouring structures, especially to omentum, were regularly present. During the first few days the site of anastomosis was found almost entirely encircled by portions of the greater omentum. Later, after weeks and months, these adhesions were less numerous, but in only two cases were they entirely absent. In one case, the serous surface being scarified after Wölfler's method, the adhesions were so numerous that it was extremely difficult to identify the site of anastomosis. Anastomoses the seat of adhesions withstood a higher pressure than those not so supported. In one case a small flap of the greater omentum around the site of a button was sutured, with excellent result.

In regard to button methods, the results were not so favourable. Chlumsky concludes that a button must stay in a dog's bowel at least five days, protecting the site of anastomosis in a purely mechanical manner; if left longer than a week it is apt to cause necrosis. In one case a Murphy button passed *per anum* three days following its application—that is, at a time when its presence was most essential. In another case it caused perforation on the third day. The result with decalcified bone button was still more unsatisfactory. All of these absorbable buttons, particularly Frank's, were absorbed early, or soon passed in a half-digested condition. Hardening or partial decalcification afforded but slight improvement.

In two children, the subjects of gastric fistulae, because of stenosis of the esophagus due to potash burns, the author had the opportunity afforded of introducing into their stomachs small undecalcified bone olives. These were in a stage of advanced digestion after two or three days. Decalcified bone olives, left in the same time, became as soft as butter. In the colon, however, they remained unaltered for from seven to ten days.

J. H. T. WALSH.

## Correspondence.

### AN APPEAL AGAINST THE BANISHMENT OF SAGS.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—Major W. J. Buchanan, I.M.S., in his *Manual of Jail Hygiene* condemns the sags, stating that they are useless as antiscorbutics. This conclusion I have no doubt he has arrived at from practical experience, but I hope to show that the fault lies not in the *sag* but the way in which the *sag* is cooked.



The value of *sāgs*, as to their being useful antiscorbutics or not is a most important point. As if it can be shown that they are antiscorbutics the saving to the Government of India is very considerable. *Sāg* will grow when no other vegetable will. On the other hand if they are useless as antiscorbutics, then prisoners during certain times of the year have to receive lime juice, lime pickles, *amchor*, tamarind pulp, patwā or roselles, etc., which in a large number of jails are bought in the markets.

The antiscorbutic properties of vegetables are due to the salts they contain, the most important being the soluble salts.

The following rough experiment will give the amount of salts both soluble and insoluble :—

Take one pound of the vegetable, put it into an iron-pot and place it on a fire and so reduce it to ashes ; when cool weigh the ashes ; this will give the total quantity of salts in one pound of the vegetable.

Again take another pound and boil it until it is properly cooked, drain the water off and keep. Now take the cooked vegetable and burn it in the same way as the uncooked vegetable ; when ashes are cool, weigh.

Now take the water in which the vegetable was cooked and evaporate it, collect the salts and weigh.

Table below gives a few vegetables treated as above :—

Name.	Uncooked.	Cooked.	Salts in water in which vegetable was boiled in.
Cholāi (Sāg)	246 grains ..	144 grains ..	106 grains.
Turai	65 " ..	20 " ..	42 "
China Cabbage	78 " ..	35 " ..	36 "
Roman Cabbage	182 " ..	67 " ..	120 "
Cauliflower	190 " ..	84 " ..	80 "

From this table it will be seen that the *sāg* has the largest amount of salts, *viz.*, 246 grains. But when cooked the amount of salts left in the cooked vegetable is reduced to 144 grains ; the remainder of the salts, and the most important being soluble, are found in the water in which the vegetable has been cooked, and this is thrown away : the amount of salt thus thrown away is 106 grains. *Sāg*, China cabbage and Roman cabbage are soft leaved vegetables, and when cooked allow their soluble salts to pass rapidly into the water in which they are cooked. Now if by any means we can keep these soluble salts from dissolving in the water and thus being thrown away, the value of the above-named vegetables as antiscorbutics would be greatly raised.

The proper way to cook spinach and *sāgs* is to allow them to cook in their own juices, only a teaspoon of water being put into the pot to prevent burning. It is impossible to cook *sāgs* this way in jails for obvious reasons, so have adopted the following method :—The vegetables are boiled in water, as usual, for the midday meal, the water in which the vegetable has been cooked and in which are all the most important salts, is not thrown away, but is left in the cooking vessel. The *dāl* for the evening meal is cooked in this water, and so the prisoner gets the benefits of the salts. I have never found that prisoners object to this, and some have told me that the *dāl* is improved.

Cabbages of all sorts I do not believe are any better antiscorbutics than *sāgs*, but owing to their leaves being harder and thicker in comparison the amount of soluble salts which gets dissolved in the water during cooking is much less, and thus they appear to be better antiscorbutics, but if the water in which *sāgs* are boiled in is used or if the *sāgs* are properly cooked, then the *sāg* will be found to be as good an antiscorbutic as the cabbage. Practically cabbages and cauliflowers are considered excellent antiscorbutics, and to settle this point, as to the antiscorbutic properties of *sāgs*, which is an important one, an analysis should be made of the salts contained in the *sāg* and compared with the two above vegetables. I feel sure "from practical experience" it would compare favourably ; and the reason why the *sāg* has been condemned is not that it has no antiscorbutic salts, which I believe it has in large quantities, but that these salts during the cooking are dissolved more readily than those in the cabbage or cauliflower for reasons already given and so leaves the cooked *sāg* with little or no salts useful as antiscorbutics, the useful salts being in the water and so are thrown away.

CENTRAL JAIL,  
BAREILLY :  
April 1900.

I am, &c.,  
E. JENNINGS,  
Capt., I. M. S.

[We invite the opinions of Medical Officers of Jails on this question.—Ed., I. M. G.]

BOTANICAL NAMES OF PULSES, &c.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—I shall be much obliged if you can tell me the botanical names of the chief pulses and peas used as food by the inhabitants of India.

Yours, &c.,

NOVICE.

[The following gives the botanical names of the chief pulses, &c., as given in Church's "Food Grains of India":—

Horse gram, *Dolios biflorus*, Hindi, *Kutti*. Pigeon Pea, *Cajanus indicus*, Hindi, *Urhar*. Haricot beans, *Phaseolus vulgaris*, Hindi, *Loba*, *Bakta*. Mung bean, *Phaseolus mungo*, Hindi, *Mung*. Moth bean, *Phaseolus acontifolius*, Hindi, *Mut*. Lablab bean, *Dolios lablab*, L., Hindi, *Sin*. Chick pea, gram, *Cicer arietum*, Hindi, *Chana*. Vetch, *Vicia sativa*, Hindi, *Anhuri*. Vetchling, *Lathyrus sativus*, Hindi, *Kesari*, *Teori*. Pea, *Pisum sativum*, Hindi, *Mutur*. The lentil, *Lens esculenta*, Hindi, *Masur*.—Ed., I. M. G.]

ACETIC ACID AN ANTIDOTE TO CARBOLIC ACID.

To the Editor of "THE INDIAN MEDICAL GAZETTE."

SIR,—I have the honour to ask you to publish the following note on the use of acetic acid as an antidote to carbolic acid.

Once when I was cleaning a wound I had to dip my hand over and over again into carbolic lotion (1 in 40), and I soon found a painful sensation in my arm from fingers to shoulder joint. I then found that I had a scratch on my finger. I applied some acetic acid on a piece of lint, and in about 20 minutes all the pain had disappeared. To test the value of the acetic acid, I painted my hand with four layers of carbolic acid and then applied a piece of cotton wool soaked in acetic acid to see the result. Within three minutes the burning pain had disappeared, and in 45 minutes the white mark of the carbolic had gone leaving only a slight redness behind. I tried the same experiment on my forearm with the same result. I offer these remarks in the hope that they may be useful to my professional brethren.

DIG DISPENSARY,  
BHARATPUR STATE,  
April 1900.

I am, Sir, yours, &c.,  
DHURNI DHUR,  
Civil Hospital Assistant.

Service Notes.

THE Royal Navy suffers much less than the Army from enteric fever. Out of a force of over 82,000 men there were only 153 cases ; while in the same year in the European army in India out of a strength of 61,000 there were no less than 2,000 cases.

THE medical graduates of Edinburgh in Hyderabad have been canvassing strongly in favour of the candidature of Dr. Bryon Bramwell for the chair of Medicine, vacant by death of Sir T. Grainger Stewart.

SIR WILLIAM MACCORMAC writes as follows of penetrating gunshot wounds of the abdomen (*Lancet*, p. 961) :—"I have now seen a large number of cases of abdominal injury in which recovery has followed an expectant treatment, and where without any reasonable doubt the intestines must have been perforated, a few in which the stomach was traversed, and two or three liver injuries. I myself entertain no doubt that in the future a perforating gunshot wound of the abdomen where from the direction taken by the bullet the intestine has almost certainly been traversed is no longer an indication of the necessity of immediate operative interference."

THE correspondent of the *Lancet* writes as follows :—

"Sir William MacCormac and Captain F. A. Symons, R.A.M.C., left last week by the *Norman en route* for England, *via* Zanzibar and the Suez Canal. Sir William MacCormac's services were, of course, of the greatest value to us, and his genial manner and courtesy will cause him to be greatly missed by the officers of the Royal Army Medical Corps, with whom he was an especial favourite, not only for his well-known abilities, but for the consideration and kindly feeling which he has always exhibited towards us. A man possessing more tact and knowledge of the world it would be difficult to find, and we all trust that he will reach home safely and in good health and will be ready to aid us in our next campaign."

MAJOR G. M. GILES, I.M.S., F.R.C.S., has been appointed Sanitary Commissioner, N.-W. P. and Oudh, in place of Major Thorold, I.M.S., gone on furlough. Major Giles contributes an interesting chapter to the second memoir of the Liverpool School of Tropical Medicine.