exercise on the mind of the sufferer, out of all proportion to the area of tissue involved.

The sickness of hope deferred, constant disappointment, endless tinkering with the wound, the presence of an unclean discharge, often in a woman who may have a most exquisite standard of personal cleanliness, all combine to produce a condition of depression and even hysteria in the patient.

The surgeon who has seen a few of these sinuses will realise more keenly than ever that no care, however meticulous, can be too great to avoid infection of the wounds which he inflicts.

That a patient who has been sent into a nursing home to undergo an operation which he or she was told would incapacitate him or her for two or three weeks at the most, should be let in for months or years of this kind of suffering and disability is a blot on the fair fame of aseptic surgery. It may be said that some of these regrettable incidents are unavoidable; this may be so, but it is the duty of the surgeon to see that they are reduced to the irreducible minimum.

TECHNIQUE.

The skin having been carefully cleansed by whatever method of disinfection is favoured by the surgeon, the sinus is opened along its entire extent so that the tunnel is converted into a gutter. The first knife and all instruments used in opening up the sinus are now discarded, and an entirely fresh set of instruments employed. The ribbon of granulation tissue is now dissected out, every endeavour being made to remove it in one piece. With it is also removed the surrounding wall of dense scar tissue. All that now remains to do is to take away a thin slice of the apposing surfaces of the wound down to the oozing gutter left by the removal of the ribbon of granulation tissue. Here again it is necessary to call for a fresh relay of instruments, as we wish at all costs to avoid any chance of reinfecting the freshened wound.

This sounds more formidable than it really is, because the instruments used are few, mostly knife and forceps.

The wound is then carefully swabbed out with tincture of iodine to destroy any chance infection that may have been left behind, and closed by through and through sutures of silkworm gut, in such a manner as to obliterate all dead spaces. No vessels are tied, no suture materials are left in the depth of the wound.

Union as a rule takes place in ten days by first intention, this applies even in cases that have been going on for years, few operations are as gratifying in their results to both surgeon and patient.

SOME ILLUSTRATIVE CASES.

Case 1.—Mrs. G., aged 56. Operation some three months previously, copious discharge, considerable pain and very great mental distress amounting to hysteria.

The sinus was opened up and the track of granulation tissue was dissected out, a suture of phosphor bronze about four inches in length was found tethered to the sheath of the rectus and was removed at the same time. The wound edges were then freshened and the wound closed by through and through sutures of silkworm gut

Union by first intention was found to have taken place when the sutures were removed in ten days' time.

Case 2.—Mrs. D., aged 32. Operation for appendicitis in August 1917, wound infected and persistent sinus until May 1923, when I excised the sinus.

This patient had suffered much at the hands of many doctors and had lost all hope that the sinus would ever heal. Her morale was much lowered and owing to the fact that exercise had been interdicted, she had put on a great deal of weight. The sinus was dissected out in one piece, the wound freshened, and closed by interrupted silkworm gut sutures. Union by first intention occurred and the stitches were removed on the tenth day.

The moral effect upon the patient was remarkable, she regained her cheerfulness and lost all neurasthenic symptoms as soon as the wound healed.

Case 3.—Mrs. E., aged 38. Operation for appendicitis some five months earlier. Infection of the wound, persistent sinus Patient very depressed mentally and run down physically. Had been in bed since the operation.

Complete excision of the old sinus and scar tissue, sides of the wound freshened, wound closed by through and through sutures of silkworm gut. Union by first intention. Immediate amelioration of all neurasthenic symptoms, and she commenced to put on weight as soon as the wound closed.

These three cases are sufficient to illustrate this brief article; it would serve no useful purpose to multiply them. I have merely quoted them to show how rapidly these troublesome sequelæ can be cut short, and how rapidly the sufferers regain their former morale and health as soon as the sinuses close.

PELVIC MEASUREMENTS IN INDIAN WOMEN.

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As medical students in this country usually read English midwifery text-books, and not infrequently forget the difference in stature that exists between women of the East and West, it was thought advisable to take a series of pelvic measurements in Indian women to see how far they varied from the text-book figures. Two hundred cases were examined, all being patients who had been admitted to the Dufferin Hospital at Agra for labour at or near full term. They were consecutive as far as possible, only certain patients who had been transferred to another ward for sepsis and others who left the hospital without permission being omitted. The examination was made at the time of their discharge on the 8th or 10th day after delivery, or later, and the measurements were all made by one observer in order to avoid any variation due to the personal factor.

The women were mainly of the middle and poor classes, and the majority came from Agra

city. Nearly three-quarters were Hindus, three Christians, two Parsees, and the rest Mussalmans.

Of the total number, 25 patients were considered to have contracted pelvis of some variety.

EXTERNAL MEASUREMENTS.

The mean external pelvic measurements of the whole 200 patients, worked out to the nearest second decimal figure, were found to be:—

Intercristal	..	9·60 inches.
Interspinous	..	8·54 ,,
External conjugate	..	7·07 ,,

The intercristal measurement was taken between the outer lip of the widest part of the iliac crests, and the interspinous between the most prominent part of the anterior superior spines.

If the 25 cases of contracted pelvis were excluded, then the figures were:—

Intercristal	..	9·69 inches.
Interspinous	..	8·67 ,,
External conjugate	..	7·22 ,,

Only two of the whole series showed an intercristal measurement which approached the English standard, i.e., 11 inches or over.

THE DIAGONAL-CONJUGATE.

All the patients were submitted to a vaginal examination and an attempt made to measure the diagonal-conjugate with the fingers. It will be seen from the following table that the promontory of the sacrum could be felt in over two-thirds of the cases:—

Promontory not felt in			63 cases.	
D.C.	4¾ inches	,,	10	,,
,,	4½ ,,	,,	65	,,
,,	4¼ or 4+ ,,	,,	39	,,
,,	4 ,,	,,	13	,,
,,	3¾ ,,	,,	4	,,
,,	3½ ,,	,,	2	,,
,,	3¼ ,,	,,	2	,,
True conjugate 2 fingers' breadth		,,	1	,,
Conjugate not taken		,,	1	,,
			200	

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In the cases of the first group, it could not always be taken for granted that the D.C. was 4¾ or more inches, as failure to reach the promontory was sometimes due to factors such as a recently healed tear of the perinæum against which it was unwise to exert much pressure, rigidity of the pelvic floor, loaded rectum, rigidity of the vaginal vault, and in one case, great contraction of the bony outlet.

In the second group, the opposite conditions obtained, and it was only owing to the extremely relaxed state of the perinæum that the fingers could stretch 4¾ inches. In the one case in which the conjugate was not taken, there was an extensive scar of the vaginal vault due to recent incision for total atresia of the cervix.

From the above figures one can calculate that the mean of the diagonal-conjugate in Indian women patients in Agra is nearer 4½ than 4¾ inches.

CONTRACTED PELVIS.

All the patients in whom the diagonal-conjugate was found to be 4 inches or less were considered to have contracted pelvis. Three cases of slightly flattened pelvis with a diagonal-conjugate of 4¼ inches or just under were also included in this group.

The cases were classified as follows:—

1. Simple flat pelvis	..	5 patients.
2. Generally contracted pelvis	..	8 ,,
3. Osteomalacia pelvis (sometimes of the severe triradiate type)	..	12 ,,
		25

In a large proportion of the cases in the first two groups the contracted pelvis was found accidentally, as three of the simple flat and six of the generally contracted type had had normal labours, while the remaining two of the latter class succeeded in delivering themselves after some delay. Two of the cases of flat pelvis required craniotomy as the diagonal-conjugate was only 3½ and 3¾ inches respectively, and the children were dead. In the osteomalacia class, nine underwent Cæsarian section, one was a forceps case, and the remaining two delivered themselves, though in one of these labour was abnormally prolonged.

WEIGHT OF THE INFANTS.

The average weight of the infants whom the mothers thought they had carried to full term, worked out to just under 6 lbs., i.e., 5.96 lbs. Some of these babies however were very small and puny, and probably not quite full term, so that the average weight at the full nine months should have been a little over 6 lbs.

As regards delivery, the size of the child in relation to the mother's pelvis was of far more importance than its actual weight and the actual measurements of the mother.

In some cases however one was surprised by the comparatively large size of the baby that came normally through a small internal-conjugate. One 4-para with a diagonal-conjugate of 4 inches delivered herself of a living 7½ lb. child in 21 hours, and said that all her previous labours had been quite normal, and another 3-para with D.C. of just over 4 inches had a 7 lb. child after 15½ hours in labour, and gave a similar history. The soft heads of Indian babies which appear less extensively ossified than those of European children may be the cause of the large amount of moulding that can take place.

CONCLUSIONS.

1. The average external pelvic measurements of Indian women in the Agra District, excluding those with abnormally small pelvis, are:—

I. S. under 8¾, I. C. under 9¾, E. C. 7¼ inches.

2. The diagonal-conjugate is on the average 4½ inches.

3. The average weight of the babies at birth is 6 lbs.

4. Slight grades of flat pelvis are found apart from any history of osteomalacia or rickets.