of the uterus. Vaginal mucosa formed the inner lining of the membrane, and erectile tissue was present between this and the outer lining of modified vulval skin. There was no bluish discoloration of the hymen as is usually seen in imperforate hymen. The vagina and the uterus were packed with iodoform gauze. The patient made an uneventful recovery, and was discharged in a fortnight.

Comment.—The points of interest in this case are: (a) The unusually large haemato-colpo-salpinx; it is amazing that the blood did not spill over the fimbriated end of the tubes. Probably the tubal ostia got closed by low-grade infection. It will be of interest to know if the patient becomes pregnant at a later date. At the time of writing she is menstruating regularly. (b) The extraordinary thickness of the hymenal membrane. It consisted of a vaginal mucosal lining on the inside and modified vulval skin on the outside, with connective and muscle tissue, intermingled, lying in between. (c) The large size of the external urethral meatus. This was remarked upon also by an English sister who was working in the theatre. In some reported cases it has been stated to be owing to attempts at intercourse through the urethra, the mucous membrane of which had been injured.

CASE 2. PINHOLE HYMEN

A Pakistani girl aged 18 was admitted to hospital complaining that she had no vagina and she wanted to get married. She stated that she had menstruated regularly and painlessly for the past four years, the periods lasting about four days each month. There were no urinary symptoms.

On examination she appeared to be a very healthy young girl. Secondary sex characters were well developed. Only the external urethral meatus could be seen and no other aperture was visible on gross examination. The uterus and the right ovary were palpable on rectal examination. It was decided to examine her under an anaesthetic (intravenous thiopentone). On stretching the hymenal membrane with the fingers I found a small pinhole aperture placed rather anteriorly. The hymen was rigid and resistant. The orifice was dilated with probes and then slit open antero-posteriorly. The vaginal mucous membrane was stitched to the skin in a transverse fashion in order to enlarge the vaginal orifice. She was discharged a fortnight later.

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Report on Use of "Dionosil" in Bronchograms in Children

This short report is based on experience obtained with "dionosil" in bronchograms in the Department of Child Health, Welsh National School of Medicine, Cardiff. The preparation was used in 15 cases.

According to the manufacturers' pamphlet dionosil is the *n*-propyl ester of 3:5-diiodo-4-pyridone-N-acetic acid suspended in water with the aid of sodium carboxymethyl-cellulose. In 20 ml. of dionosil there is about 6 g. of iodine, but there is no liberation of free iodine or inorganic iodide. Chemically it is closely akin to diiodone, but is more slowly absorbed, so that in radiographs shadows remain well defined for at least 30 minutes. The ester is slowly hydrolysed, absorbed from the lungs, and then excreted via the kidneys.

ADVANTAGES OF DIONOSIL OVER IODIZED POPPY-SEED OIL (B.P.)

Dionosil has two main advantages. First, it is fairly rapidly absorbed from the lungs and has almost completely disappeared from the lung fields within 48 hours. Iodized poppy-seed oil, on the other hand, is often still present in considerable quantity at the end of a month, and may give the radiographic appearance of miliary mottling for as long as six months. This is of particular importance in children with suspected bronchiectasis associated with primary tuberculosis, as, if a bronchogram is performed with poppy-seed oil, and miliary tuberculosis should happen to occur at a later date, the x-ray appearance may be confused by the oil remaining in the lung and the diagnosis be delayed.

The second advantage is that with dionosil there is almost no alveolar filling. This means that the element of urgency in performing the bronchogram is removed. Whereas, when using poppy-seed oil, the films had to be taken within seconds of the oil being injected owing to the rapidity with which alveolar filling occurred, it is possible with dionosil to fill the lungs more slowly and to take the films more deliberately. Indeed, if there is any doubt whether adequate filling has been obtained, the child can be screened before the film is exposed and more dionosil injected if required. This is of particular value on the right side, as the right middle lobe is best demonstrated by a right lateral film, and after opaque medium has been introduced into the left side this view is obscured. A dosage of 8 ml. per lung has been found adequate for children up to about 11 years. Older children require more.

DISADVANTAGES OF DIONOSIL

Being suspended in a watery base, dionosil irritates the trachea and bronchi to a greater extent than poppy-seed oil. Coughing, therefore, occurs more readily. It is interesting to note that, if the child does cough, the dionosil is not sprayed out into the alveoli as the oil would be, but may be coughed up into the throat and swallowed, with the result that subsequent films are sometimes spoiled by superimposition of the opaque medium in the oesophagus. The ease with which coughing is provoked means that skilful anaesthesia is required. A combination of basal narcotic (rectal paraldehyde), local analgesic (cocaine), and general anaesthetic (gas, oxygen, and trilene) is used in this department. The dionosil is given by a catheter introduced under direct vision into the trachea. Gallamine triethiodide has been used in some cases, but an endotracheal tube has then to be passed to control breathing, and this, with the tube for the opaque medium, may be too large for the trachea of a small child.

Another disadvantage of dionosil is that the suspension readily separates out. For this reason the bottle must be vigorously shaken before use and the syringe filled only at the last minute. After the injection has been made the syringe must be immediately disconnected, washed through, and not used again. A dry oiled syringe should be used. If there is any delay in dismantling it, the barrel will probably stick and the syringe is thereafter useless.

Bronchograms taken with dionosil do not show quite the same depth of contrast as those taken with poppy-seed oil, but allowance can be made for this in exposing the film.

SUMMARY AND CONCLUSIONS

The advantages of dionosil are: (a) The speed with which it is absorbed from the lungs. (b) Alveolar spread is slight. There is therefore no hurry to take the films, and the child can be screened to ensure perfect filling of all bronchi.

The disadvantages are: (a) Coughing may be troublesome unless anaesthesia is good. (b) Dionosil can easily gum up the syringe. A minimum of four 10-ml. syringes should be provided for each bronchogram—one for each lung and two extra in case further filling is required.

Dionosil has advantages over poppy-seed oil for bronchograms in children. It should always be used if the child has primary pulmonary tuberculosis.

Finally, it must be emphasized that, whatever opaque medium is used, bronchograms in children should be performed only by a practised team, otherwise complete filling of all lobes will not be obtained. Without a perfect bronchogram the thoracic surgeon is not in a position to advise whether surgery would be of value.

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