CASONI TEST

A review

Hydatid fluid for the Casoni Test consists of fluid obtained from cysts of bovine origin and rendered sterile by Seitz filtration. The fluid is tested and filled into ampoules by the Commonwealth Serum Laboratories, Commonwealth of Australia.

The Intradermal (Casoni) Test

This test requires special care in technique and in interpretation if reliable results are to be obtained. The reagent in general use is pooled hydatid fluid derived from uncomplicated cysts, fluid containing scolices being usually selected. Its sterility is ensured by filtration. Its antigenic properties are retained for many months, even at room temperature.

The skin of the outer half of the upper arm is most suitable for the test. If the patient has been tested before, a fresh area of skin should be used so as to avoid a fallacious response from local sensitisation.

The fluid is injected intradermally in amount sufficient to raise a white area approximately one centimetre in diameter. Usually about 0.25 cubic centimetre (four minims) of the fluid is required. For controls a similar injection of normal saline solution (0.9 per cent) is made a few centimetres away and the skin of the other arm or forearm is stroked moderately firmly with a blunt instrument (the stroke test).

In a typical immediate reaction the control wheal fades rapidly, while that from the hydatid fluid increases and usually shows pseudopodial outrunners. A zone of erythema surrounds the wheal, which reaches its maximal dimensions within half an hour and then fades quickly. The greatest diameter of the wheal is measured from the extremity of one outrunner, and a second measurement is taken approximately at right angles to the first.

Reactions are recorded as positive when the wheal measures at least 2.4 centimetres in one diameter or 2.2 centimetres in both diameters. Doubtful reactions are those in which both diameters are from 2.0 to 2.2 centimetres or in which the smaller diameter is less than 2.0 centimetres while the larger lies between 2.2 and 2.4 centimetres.

In these the test should be repeated. Failure to react is recorded when the wheal is smaller than the measurements given above. If the wheal from the control injection reaches the dimensions of a doubtful reaction, a positive result with the hydatid antigen must be disregarded.

The normal response to the stroke test consists of a red line confined to the area of pressure followed within half a minute by a spreading flush. Swelling and wheal formation over the line of the stroke are characteristic of factitious urticaria. When this condition is present an immediate reaction with the intradermal test has no significance.

Further investigation is required to interpret the significance of doubtful or positive reactions following the injection of hydatid fluid. The possibility of past or present infestation with other helminths should be considered. If such be proved, a positive result with the intradermal test must be disregarded.

The presence or absence of generalised skin disease, pruritus, urticaria, angioneurotic oedema, hay fever and asthma should always be recorded. When any of these is present, the results require very careful interpretation, since some fallacious reactions have been recorded under these conditions.

The above standards being used, a positive immediate reaction will be found in about 75 per cent of patients with hydatid disease before their first operation for this complaint. The routine use of this test on individuals suspected of harbouring the hydatid parasite leads to the testing of large numbers of uninfested persons. Including patients with hydatid disease who fail to react, the absence of an immediate response correctly indicates freedom from hydatid infestation in at least 95 per cent of those tested. When there is no history of a recent urticarial rash (indicative of rupture of an hydatid cyst) failure to give an immediate response excludes a ruptured or suppurating cyst, except in those very rare instances in which the cyst fluid possesses no antigenic properties.

The immediate reaction is of diagnostic value only before the first operation for hydatid disease. The reaction may persist for years after the operation in the absence of further infestation.

In our experience, symptoms of anaphylactic shock following this test have occurred only in patients tested repeatedly during the post-operative period. These symptoms are readily controlled by the injection of adrenaline.

The Delayed Reaction

Some hours after the intradermal injection of hydatid fluid an area of erythema with subjacent induration may be found at the site of inoculation. This reaction may fade within twelve, but usually
persists for at least twenty-four hours. Intense reactions with vesiculation, local heat, redness and extensive oedema are distinguished from erysipelas or cellulitis by the absence of pyrexia, of general toxaeic symptoms and of glandular enlargement.

The delayed reaction is usually read between eighteen and twenty-four hours after injection. A positive response is characterised by infiltration and oedema in an area at least four centimetres in diameter about the site of injection of the hydatid antigen and an absence of induration in the vicinity of the control injection. When a delayed reaction is observed, it is necessary to exclude sensitisation to host protein, infestation by other helminths and local sensitisation resulting from a previous injection of hydatid antigen.

A delayed response to the first test is found before the first operation in less than half of the patients with hydatid infestation. Failure to give this reaction is of no value in excluding the disease, but a positive delayed response under these circumstances indicates the presence of hydatid infestation. It is of no value in the diagnosis of recurrent or residual cysts.

**BOOK REVIEWS**

**ESSENTIALS OF SURGERY FOR DENTAL STUDENTS**


Although this book has been written primarily for the dental student there is much in it of great interest to the more senior dental practitioner. We are all students in that there is always something new to learn, and in this volume there is not only the latest in surgical knowledge as concerns the dental surgeon but also a valuable refresher course for those who do not see so often the more unusual abnormalities and would wish to keep their knowledge up-to-date.

The early recognition of the rare pathological conditions of the oral tissues is a function that the dental surgeon should perform so that the fullest co-operation can be given to the general surgeon. The general dental practitioner sometimes has not that experience necessary for an early diagnosis of abnormalities such as tumours of the jaws which would benefit by early surgical intervention, and this book supplies a need that has been felt by many. The illustrations, many of which are colour photographs, are particularly valuable, and the text is set out in a form that will appeal to those who have not the time or inclination to hunt through a more detailed work.

More care might have been applied to the sections dealing with purely dental matters. The heading Vincent's Angina or Ulcerative Stomatitis should read Vincent's Infection or Ulcerative Gingivitis as this is what is described. Treatment is far more complicated than the author suggests, and such methods as the packing of the pockets and interdental spaces and the use of chromic acid with hydrogen peroxide are ignored. Those who have had experience in the treatment of fractured jaws will be surprised to read that the four-tailed bandage is advocated for the support of a fractured mandible as this method has been discredited for many years.

The main purpose of the author is not to teach dental students matters which they learn in their dental school, but to inculcate general surgical principles which will assist them not only in their examinations but will also lay a sure foundation for their outlook in general practice. The publishers have produced an attractive work which will be an asset in any dental surgery.

**A POCKET MEDICAL DICTIONARY**


The appearance of a seventh edition of this remarkably complete, yet conveniently small dictionary is eloquent proof of its popularity and usefulness. In addition to the Dictionary of Medical Terms (370 pages) there are lists of medical abbreviations, weights and measures, average normal physiological standards, and diseases designated by the names of those who discovered or first described them; sections on First Aid, Urine Testing, Poisoning, Diet, and Infant Feeding; and useful illustrations of trays prepared for nursing techniques. Print and paper are good, and the price is impressively reasonable. But we looked in vain for the following words: D.D.T., benzodrine, vital statistics, streptothricin, stilboestrol, sex-hormones, choline, aneurin, nicotinic acid, pyridoxine, ascorbic acid, thiouracil, scrub typhus, pyknolepsy, air sickness, sea sickness and McBurney's point. The difference between a cholagogue and a choleretic is not mentioned. "F.G.S." stands for "Fellow of the Geological Society," not "Fellow of the Geographical Society," which is abbreviated "F.R.G.S." "F.E.S." should be "F.R.E.S." and "F.I.C." should be "F.R.C.I." "Stenson" should read "Stensen," and "Tay-Sach's," "Tay-Sachs's,"

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