

AN APPARATUS FOR ASPIRATION OF POSTERIOR PHARYNGEAL SECRETIONS

RUBBER-TIP SUCTION AS AN AID TO OBTAINING POSTNASAL MUCOID MATERIAL*

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IN ATTEMPTING to demonstrate eosinophilic cells in routine smears of the nasal secretions we have developed an apparatus whose simplicity, inexpensiveness, and effectiveness would seem to warrant its description. This instrument has been designed and used with considerable success in carrying out diagnostic studies in a large number of pediatric patients.¹

Construction of the apparatus was prompted by repeated failures to demonstrate eosinophilic cells in routine smears of nasal secretions obtained from sputum smears, smears of freshly swabbed secretions from the anterior nares, and smears of nasal discharge or swabbings from the posterior nasopharynx. Although clinical impressions of allergic reaction throughout the entire upper respiratory tract (and especially the sinuses) were confirmed in all patients by positive skin reactions to allergenic agents, the techniques enumerated above repeatedly gave positive tests for eosinophilic secretions in less than 15 per cent of patients studied. Such a small incidence of demonstrable eosinophilia in nasal secretions contrasted poorly with the studies of Hansel^{2, 3} and others,⁴ who report over 90 per cent positive smears obtained in serial studies of nasopharyngeal secretions taken from known allergic patients.

Accordingly we devised the apparatus illustrated in Fig. 1. It is assembled from a shortened 20 ml. Fisher pipette of 0.6 cm. bore, a small rubber bulb, and a small length of flexible rubber tubing of 0.7 cm. diameter. The soft rubber tip prevents injury to the pharynx, and the rubber sheath overlying the glass protects the stem from breakage incident to striking against teeth.

The instrument is utilized as follows: The physician, equipped with headlamp and two tongue depressors, inspects the posterior pharynx for site of the postnasal mucoid discharge. This is done usually in the morning about half an hour after the patient has awakened and when his sitting position has encouraged postnasal drainage of secretions from the overfilled sinuses. With tongue depressors gently depressing the tongue base, and so positioned against the teeth as to prevent impromptu closure of the mouth, the aspirator (with hand bulb compressed) is slipped quickly into the throat. Mucus is suctioned from the posterior pharyngeal wall into the pipette barrel and the apparatus is then promptly withdrawn.

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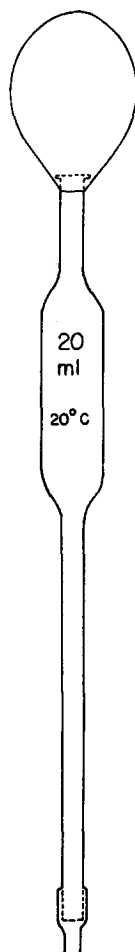


Fig. 1.—Aspirator for obtaining posterior pharyngeal secretions.

Thin smears of the secretions thus obtained are prepared at once by depositing a small glob of the mucoid matter on the surface of a clean glass slide, and spreading the material over the length of the glass much in the manner of preparing a blood film. When dry, the smear is stained, using either Mallory's⁵ or Hansel's⁶ solutions, and then the dry preparation is examined microscopically for evidence of the brightly colored clumps of eosinophilic cells whose presence denotes a "positive" smear.

REFERENCES

1. Price, W. C., and Solow, I. A.: Incidence of Nasal Eosinophilia in 120 Allergic Children. In preparation.
2. Hansel, F. K.: Allergy of the Nose and Paranasal Sinuses, St. Louis, 1936, The C. V. Mosby Company.
3. Hansel, F. K.: Diagnosis of Allergy of the Nose and Paranasal Sinuses, Arch. Otolaryng. 34: 1152, 1941.
4. Rhodes, W. L.: Allergy and Infection of the Nose and the Paranasal Sinuses, M. Rec. 156: 224, 1943.
5. Gradwohl, R. B. H.: Clinical Laboratory Methods and Diagnosis, St. Louis, 1943, The C. V. Mosby Company, pp. 943-944.
6. Gradwohl, R. B. H.: Clinical Laboratory Methods and Diagnosis, St. Louis, 1943, The C. V. Mosby Company, p. 1083.