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A Presumed Case of Dextran-induced Anaphylactoid Reaction

To the Editor:—The article by Bernstein *et al.*¹ presents a severe reaction to dextran. However, the authors do not provide sufficient evidence that this reaction was a case of dextran-induced anaphylactoid reaction (DIAR). By virtue of his previous exposure to dextran, the patient described certainly was at risk of developing dextran reactive antibodies, and sustaining an allergic reaction to dextran on subsequent exposure. The temporal relationship between the dextran 40 infusion and the precipitous fall in arterial blood pressure was typical of DIAR.² Clinically, what mitigates against DIAR, in this instance, is the reported absence of skin manifestations (flush, erythema, urticaria) and bronchospasm.

Ljungstrom *et al.*³ stated that the diagnosis of DIAR was dependent on circulatory symptoms being preceded by, or occurring in combination with, cutaneous symptoms or bronchospasm. Furthermore, for diagnosis of reactions of grade III and IV, dextran reactive antibody titers should be elevated in serum drawn before the reaction (obtainable from blood drawn preoperatively for cross-matching), and considerably reduced after the reaction.⁴ Bernstein *et al.* did not do this. Examining this report by these criteria, a factor other than dextran would be judged to be the probable causative agent, and the reaction to dextran, in this instance, would be designated as non-likely.³ Lacking the ability to measure dextran reactive antibody titers, the simple presence of an allergic reaction may be elicited through an abrupt rise in serial plasma histamine levels, and a sudden fall in serial plasma complement proteins C₃ and C₄ levels.⁵ Unfortunately, these latter tests fail to elucidate the agent responsible for the reaction.

Large series of patients have shown that it is possible to confirm DIAR with a reasonable degree of certainty on the basis of specific clinical observations combined with laboratory investigations.^{2,3} Bernstein *et al.* have made a presumptive diagnosis of a dextran-induced anaphylactoid reaction, without either of these.

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In Reply:—We have, unfortunately, witnessed numerous episodes of DIAR. Severe hypotension without cu-

taneous manifestations or bronchospasm was common. While one might anticipate these to occur, Lungstrom's

article, to which Dr. Janzen refers, discusses a case of a grade III reaction without these findings. We wonder if the other signs did not develop because the patient was under general anesthesia with controlled ventilation.

We are in agreement with Dr. Janzen that the temporal relationship was typical of DIAR. While it may have been advantageous to have obtained DRA levels, we refer to the original criteria of Ring and Messmer, as

we did in our article, which did not require measurements of mediators or histamine to diagnose DIAR.

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A New Endotracheal Tube Equipped with Side Ports for Topical Anesthesia of the Trachea

To the Editor:—Topical anesthesia of the respiratory passage is useful in reducing the intensity of the tracheal reflex and cough.¹ Before insertion of an endotracheal tube (ETT), we often directly apply local anesthetic spray into the trachea or inject a small amount of local anesthetic percutaneously through the cricothyroid membrane. This decreases the duration of circulatory responses to tracheal intubation and enhances tolerance of the tube with less anesthetic drug. However, the duration of its effect is not sufficient (30–45 min with lidocaine²) to prevent noxious stimuli by the ETT placed during surgery or critical care.

We developed a new type of an ETT equipped with two side ports for topical administration of local anesthetics into the trachea (fig. 1). One side port exists 0.5 cm distal to the inflatable cuff of the ETT, and the other side port 0.5 cm proximal to the cuff. Both open outwards to the external wall of the ETT. The side ports are joined to pilot tubes, the proximal ends of which are for infusion of local anesthetics (fig. 2). Thus, topical anesthesia to the distal and/or the proximal portions of the trachea can be applied without disconnecting the breathing circuit.

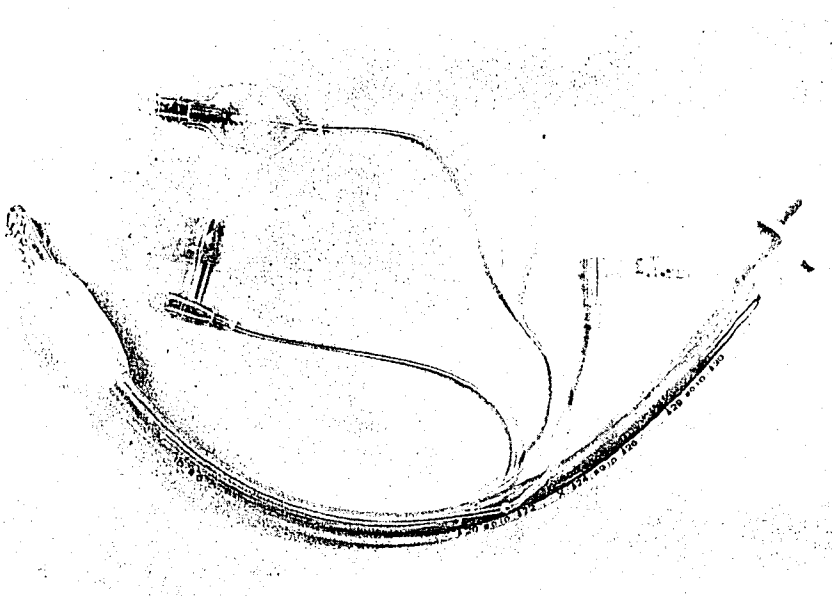


FIG. 1. A new endotracheal tube with two side ports for topical anesthesia of the trachea.