

others,³ permits rates of intravenous infusion up to a maximum of 80 $\mu\text{g}/\text{min}$, all of the patients with severe cardiovascular complications whom we reported on were treated with infusion rates which were within the range considered to be "safe," even by Dr. Ingemarsson; namely, 10 to 30 $\mu\text{g}/\text{min}$ (Table I in Reference 1). Similarly, in a report by Jacobs and associates,⁴ who described four patients with pulmonary edema during terbutaline tocolysis, the infusion rates used were within the above-suggested range. It seems, therefore, that not the rate of administration of terbutaline but, rather, the individual patient's response to the infusion plays an important causative role in the development of these complications. At present, we tend to believe that the development of severe side effects could be linked to prolonged tachycardia and excessive circulating plasma volume, both of which lead to a state of high cardiac output and, ultimately, to cardiac failure and pulmonary edema.

Since awareness of the potential risks of beta-mimetic tocolysis is expected to increase, we hope that improvement in the surveillance of patients undergoing treatment will follow, with a resulting decrease in the incidence of these adverse and potentially serious side effects.

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REFERENCES

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2. Speroff, L., Morton, M. J., Wagner, J. M., Johnson, K. A., and O'Grady, J. P.: The effect of terbutaline on maternal cardiac function. *J.A.M.A.* (In press.)
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Technique to facilitate delivery of high-floating head at cesarean section

To the Editors:

I have read with interest the article by Warenski (*AM. J. OBSTET. GYNECOL.* **139**:625, 1981).

The application of a small cup (No. 4) of the vacuum extractor seems, to me, to be even less traumatic for infant and mother.

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Reply to Dr. De Clercq

To the Editors:

Although advocates of the Mahlmstrom vacuum extractor have sometimes extended its use to the delivery of the head at low-segment cesarean section, the elapsed time for a safe and reliable application would appear to be a disadvantage in this situation. The silicone rubber vacuum cup of Kobayasha, which has recently become available, can be applied more promptly and might provide a workable alternative to the forceps technique that I described in aiding the delivery of the high-floating head at cesarean section.

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Technique for calculating transfusion volume required to achieve desired hematocrit

To the Editors:

The article, "Isovolumetric partial exchange transfusion in the management of sickle cell disease in pregnancy," by myself, Garcia and Welt, was published on page 403 of the October 15, 1981, issue of the *JOURNAL*. Since returning the galley proofs of that article, I have discovered a simple technique for calculating the volume of transfusion required to achieve a desired hematocrit:

$$V_t = V \cdot \ln \left\{ \frac{h_t - h_d}{h_t - h_i} \right\},$$

where V is the patient's estimated blood volume, h_t is the hematocrit of the transfusate, h_i is the patient's initial hematocrit, and h_d is the desired hematocrit. V_t is the volume of transfusate required to achieve the desired hematocrit.

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Endocervical lavage in early pregnancy

To the Editors:

Like your contributors Goldberg and associates (*AM. J. OBSTET. GYNECOL.* **138**:436, 1980), my colleagues and I have been investigating the use of endocervical lavage in early pregnancy. We collected aspirates from 12 first-trimester pregnancies prior to termination and prepared them for histologic studies: microscopic analysis of the material showed that all contained fragments of decidua, as well as obvious villous material. Cells cultured from the specimens were karyotyped and tissue typed, and comparison was made with the karyotypes of