Aetiology of hydrops fetalis

Sir,

Drs. Radford, Izukawa, and Rowe (1976) in their article on congenital paroxysmal atrial tachycardia happen also to contribute a great deal to the literature on hydrops fetalis. Several reviews on the conditions associated with hydrops fetalis point to the varying aetiologies of the disease (Becker, 1975; Driscoll, 1966). Most of these diseases are associated with congestive heart failure, severe anaemia (usually haemolytic), and/or cellular damage to the liver or placenta. Unfortunately, no one process can explain all the cases. In erythroblastosis fetalis, hydrops fetalis is most related to hydropsfetalis (Phibbs et al., 1974) or low onotic pressure (Baum and Harris, 1972) rather than universal anaemia. Whether hyproproteinemia is due to liver disease or to congestive heart failure is uncertain; however, cases of 'pure' output failure such as those reported by Radford et al. offer an ideal opportunity to test the hypothesis that hydrops results from hydroproteinemia secondary to heart failure and not vice versa. Do they have the necessary protein levels on their patients?

KENNETH L. HARKAVY
Columbia Hospital for Women,
Georgetown University,
2425 L Street, Northwest,
Washington, DC 20037, USA.

References


Dr. Radford and colleagues comment:

Regarding the interesting letter from Dr. K. L. Harkavy, we do have serum protein data on 3 of our 12 patients (Cases 8, 11, 12). Initial blood specimens were taken on the first day of life in all 3 patients and repeated later in 2. Electrophoretic pattern analyses were also done. The relevant results are in the Table.

Although the data are limited, there was definite hypoalbuminaemia in Cases 8 and 11. This would fit with the hypothesis raised by Dr. Harkavy, i.e. that hypoproteinemia was secondary to heart failure and led to hydrops.

D. J. RADFORD, T. IZUKAWA,
and R. D. ROWE
The Hospital for Sick Children,
555, University Avenue, Toronto,
Ontario, Canada.

<table>
<thead>
<tr>
<th>Patient age</th>
<th>Case 8</th>
<th>Case 11</th>
<th>Case 12</th>
<th>Age related normal range</th>
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<tr>
<td>Total protein g/100 ml</td>
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<td>4-6</td>
<td>5-5</td>
<td>4-6-7-0</td>
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<td>Albumin g/100 ml</td>
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<td>0-1-0-3</td>
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<td>α₂</td>
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<td>0-4</td>
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<td>0-3-0-6</td>
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<tr>
<td>γ</td>
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<td>0-5</td>
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<td>0-6-1-2</td>
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