In order to save blood and reduce costs, a transfusion service should adopt a maximum surgical blood order schedule and crossmatch the appropriate number of units of blood as determined by the schedule. Another possible approach to better utilization and cost reduction would be to reduce the number of crossmatches performed prior to operation. The presurgical work-up would include blood grouping, Rh typing and an antibody screen of the patient’s blood. The blood bank would have available, but not crossmatched, the number of units indicated by the maximum surgical blood order schedule. Should blood be required during the surgical procedure, the crossmatch could be completed within 45–60 minutes. When the need is urgent, a partial crossmatch could be performed and the unit released while the crossmatch was carried through to completion. Any patient with an irregular antibody would have the number of units recommended by the maximum surgical blood order schedule crossmatched prior to operation to ensure the availability of compatible units should they be needed. More blood would be available to others, and costs would then be reduced significantly (Table 2).

There are further considerations, however. Our hospital depends upon the Central Blood Bank of Pittsburgh, which serves an additional 29 hospitals in the Pittsburgh area. Several times in the past year, critical shortages of blood necessitated the curtailing of many routine operations. Had a maximum surgical blood order schedule been in effect in all of the participating hospitals, this might not have occurred, and possibly outdated of blood would have been curtailed.

A maximum surgical blood order schedule or a protocol such as the one we have proposed appears to be the answer to enhancing the utilization of blood in any transfusion service. Its implementation will insure adequate supplies of blood, and costs to hospitals and patients alike will be reduced.

PAUL POTTGEN, PH.D.  
MARY GOURLEY, MT(ASCP)  
E. R. DAVIS, M.D.  
Department of Pathology  
Jefferson Center  
South Hills Health System  
P. O. Box 18119  
Pittsburgh, Pennsylvania 15236

Reference

A Unicryptal Colonic Adenoma, the Smallest Colonic Neoplasm Yet Observed in a Non-polyposis Individual

To the Editor:—To the best of our knowledge, microscopic neoplasms of the colon and rectum in grossly normal mucosa of non-polyposis individuals have never been reported. By chance, in a section of just such grossly normal mucosa, from a 48-year old non-polyposis individual, we had the fortune to encounter a unicryptal adenoma. The crypt in question is shown in Figures 1 and 2. Its difference from its neighbors is immediately apparent.

Received May 27, 1977; received revised manuscript September 15, 1977; accepted for publication September 15, 1977
Key words: Colon; Neoplasia; Adenoma, unicryptal.
Address reprint requests to Dr. Lane.

Table 1. Utilization of Blood and Blood Products for 314 Elective Surgical Procedures

<table>
<thead>
<tr>
<th>Blood Products</th>
<th>Units Ordered</th>
<th>Units Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole blood</td>
<td>332</td>
<td>29</td>
</tr>
<tr>
<td>Packed erythrocytes</td>
<td>306</td>
<td>21</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>638</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

Table 2. Potential Impact of MSBOS* or Proposed Protocol on Blood Supply and Costs

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>MSBOS</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABO, Rh. antibody screening</td>
<td>314</td>
<td>314</td>
<td>314</td>
</tr>
<tr>
<td>Crossmatch (units of blood)</td>
<td>638</td>
<td>317</td>
<td>50</td>
</tr>
<tr>
<td>Savings (units of blood)</td>
<td>321</td>
<td>588</td>
<td></td>
</tr>
<tr>
<td>Financial savings ($)</td>
<td>321 X</td>
<td>588 X</td>
<td></td>
</tr>
</tbody>
</table>

* Maximum surgical blood order schedule.

It is greater in diameter, does not show differentiation into mature goblet and absorptive cells, and has the typical crowded picket-fence epithelium with elongation and superimposition of nuclei. These features taken together produce the classic appearance of an adenomatous tubule, as might be found in any grossly visible adenoma.2 Serial sections from the paraffin block showed that the adenomatous change remained confined to this single crypt, with normal crypts surrounding it.

Carcinomas and adenomas of the colon and rectum are extremely common, and over many years and in many laboratories, in the process of studying them...
pathologically, many thousands of sections have included areas of grossly normal mucosa. Yet, in spite of this, neoplasms of only microscopic dimensions (not visible to the naked eye) have not been reported, except in polyposis.1

In cases of familial polyposis, serial sections parallel to the surface of grossly normal mucosa have disclosed a number of purely microscopic neoplasms. It is noteworthy that none of the microscopic neoplasms was carcinomatous in spite of the predilection for carcinoma in this condition. All the neoplasms observed consisted of benign adenomatous tubules. At the lower limit of recognition of neoplasia with the light microscope, adenomas involving only one, two or three crypts were encountered.

We believe that our specimen is the smallest neoplasm of the colon ever observed in a nonpolyposis patient. It is at a minute microscopic state in its development, so that it is seen to involve only a single crypt.

This type of observation—in addition to the studies of polyposis—and the fact that microscopic carcinoma has not been reported to occur except in adenomas—seems to reinforce the idea that the transformation of normal colonic epithelium to adenomatous epithelium is a step that precedes the development of carcinoma.

We urge that any examples of minute microscopic neoplasia in grossly normal large bowel mucosa be reported, for they would constitute another piece in the jigsaw puzzle of the morphogenesis of colonic carcinoma.

BRUCE A. WODA, M.D.
KENNETH FORDE, M.D.
NATHAN LANE, M.D.
Division of Surgical Pathology
Department of Surgery
College of Physicians and Surgeons
The Faculty of Medicine of Columbia University
630 West 168th Street
New York, New York 10032

References