OBSERVATIONS ON THE CONSERVATIVE TREATMENT OF EXOMPHALOS*

BY

EDWARD DRESCHER

From the Paediatric Surgery Clinic, Medical Academy, Szczecin, Poland

In 1953 Bożek published two cases of exomphalos treated conservatively with good result; it was the first suggestion of this kind in Polish medical literature. In Poland, as in other countries, majority opinion has it that early intervention preserves the newborn infant from severe complications, and for this reason most paediatric surgeons regard operation as the method of choice.

In the Paediatric Surgery Clinic in Szczecin conservative treatment of exomphalos has been employed by me for 12 years as a general principle. My reason for doing so was an unusual case. During the last war a child was born near the front line with exomphalos, and for three weeks there was no medical attention. When the child was finally brought to a hospital the surgeon stated that the tumour was covered with skin to such an extent that an operation was completely unnecessary. The simple home treatment of a countrywoman had saved the child from infection and rupture of the tumour, which are the complications that advocates of an early operation fear.

I believe that some deformities are, in a certain sense, a delayed development which the organism tries to complete. To these belong some forms of the meningocele and exomphalos.

In the cases where there is a possibility that repairing processes exist, immediate surgical intervention seems pointless and sometimes even not indicated. Of course, this view does not extend to all forms of exomphalos and especially not to those where there is the probability that dangerous complications will arise. The indications for operation are set out below.

1. Hernias with a damaged amnion covering, i.e. with eventration, must be operated on immediately.

2. If the base of the tumour is considerably smaller than its greatest circumference so that it forms a kind of pedicle, then the danger of incarceration of the intestines transposed into the tumour

is so great that it is better to perform an immediate operation (Fig. 1). In addition, the difficulty of the passage of the intestinal contents seems a sufficient reason for operation. An additional factor is the difficulty in epithelization of the large surface of the tumour from the narrow ring of the pedicle.

3. If the tumour is very small the indications for an operation are relative (Fig. 2); although spontaneous healing appears in such cases easily, the operation is also easy and complications are unlikely.

In my opinion operative treatment of the large exomphalos with great loss of skin covering is dangerous and may cause some disturbance in function of abdominal and thoracic organs. It is not the operation that matters, which the newborn tolerates well, but the great pressure that appears in the abdominal cavity and, secondarily, in the thoracic cavity, and influences the action of the intestines, heart and lungs.

I have had in my care in this clinic 20 newborn infants with exomphalos (Table); 12 of them I have treated conservatively, and eight by operation. To estimate the results of a method of treatment it is necessary to exclude from the comparison the hope-

TABLE

	No. of Cases	No. Surviving	No. Dying
<i>Conservative method</i>			
Complications:			
Rupture	—	—	—
Other congenital severe malformations	3	—	3
Enterocolitis	1	—	1
Normal	8	7	1
Total	12	7	5
<i>Operated group</i>			
Complications:			
Rupture	2	—	2
Other congenital severe malformations	1	—	1
Enterocolitis	—	—	—
Normal	5	3	2
Total	8	3	5

* A paper read at a meeting of the British Association of Paediatric Surgeons in London, September 1962.

FIG. 1.—'Pedicellate' form of exomphalos.

FIG. 2.—Exomphalos of small extent.

less cases, that is those in which numerous coexisting congenital malformations influence the fate of a child decisively, or where there were severe complications not dependant on the method of treatment.

In the first group there were four such cases (in three of them there were numerous developmental faults, including heart faults, and in one there was enterocolitis); in the second group there were three cases (one congenital obstruction of the intestine and two eventrations caused by the tumour covering bursting). If one rejects these cases from the discussion, it appears that the proportion for the cases treated conservatively is 7:1, and for the operated ones, 3:2. This proportion is clearly in favour of conservative treatment. The advocates of the operative procedure may be interested in the causes of death of the operated newborns. It appears that pneumonia and peritonitis were

stated in two of the dead infants. And so death was caused by infectious complications probably bound with the operation, although these children were treated with antibiotics of a large spectrum.

This seems to argue against the view that early operation prevents infection, even more so because among children treated conservatively only one death was caused by peritonitis. This was a newborn with a hernia the size of a newborn baby's head; it was so large that it is doubtful if any operation could result in covering the tumour. Thus, from my experience it follows that the fear of infection of the peritoneum through the amnion covering the tumour is groundless if one applies suitable aseptic procedure, such as daubing the tumour surface with 1% water solution of mercurochrome and sometimes adding 10% argentic nitrate.

The advocates of operation sometimes emphasized as an advantage the brief time taken to heal in comparison with conservative treatment. Healing after an operation followed in 20 days on average and after conservative treatment in 51 days; so that the superiority of operative treatment is evident, in this respect.

A further advantage of operation is one solution to the problem of covering of the loss of skin. I wish to lead a polemic with this view:

1. Not all cases treated conservatively demand a later operation, because the tumour withdraws completely into the abdominal cavity and the scarred surface is hard and resistant (Figs. 3 and 4). This withdrawal of the tumour into the abdominal cavity follows spontaneously without applying a pressure dressing as some authors recommend.

2. In some cases an early operation is limited to the covering of the tumour with skin only, which in turn demands a secondary plastic operation of the abdominal wall.

Bearing in mind these considerations, conservative treatment seems superior compared to operative treatment for the following reasons:

1. Operative shock and possible post-operative complications are avoided.

2. Pressure on the diaphragm, heart and lungs by pressing the viscera into the abdominal cavity is avoided.

3. Rapid prevention against bacteria penetrating through the amnion membrane is attained by the formation of a dry scab.

4. The healing of the skin loss follows slowly, but it gives a good permanent covering.

5. The treatment may be performed in any hospital.

The exomphalos, as a malformation, has a

FIG. 3.—The exomphalos after birth.

FIG. 4.—The same case four months later.

tendency to heal spontaneously, and medical aid must be limited only to prophylactic procedure to help this physiological process. Operative intervention is a necessary evil which should be applied only in those cases of rupture of the covering mem-

brane and where there is a danger of disturbances of the passage of the intestinal contents.

REFERENCE

Božek, J. (1953). Observations concerning the treatment of umbilical hernia. *Pediat. pol.*, 28, 1125.