EARLY SECONDARY REPAIR OF COMPLETE TEARS

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There is still a general lack of agreement as to when complete tears that have broken down after immediate suture should be repaired again. In most of the textbooks the point is evaded by the statement that when a primary repair is done within 24 hours of delivery a successful result is usually obtained. While there is no doubt that this is true if the repair has been carefully done under good operating conditions, many do break down within the fortnight under the conditions of general practice. This is shown by the frequency with which patients with complete tears come up for operation months or even years after delivery. For instance, during the last five years 40 of such cases have been operated upon in the Women's Hospital, Liverpool. In each of these an immediate repair had been unsuccessful; healing by second intention had been allowed to take place and the necessary repair deferred until the patient was driven to hospital by the inconvenience of the incontinence or freed from the responsibility of the care of the baby to have time for the operation. Most of these late operations would have been avoided by the procedure here suggested.

The recommendation given by most authorities is that a secondary repair is best deferred for at least three months after delivery, until the parts are clean and involution has taken place. Against such a course there are, however, two very real objections. In the first place, the woman is left most uncomfortable at a time when she needs all her energy. In the second place, involution, though bringing certain advantages, entails the great disadvantage that both the torn muscle and the mucous surfaces retract and undergo permanent shortening, with the result that undue tension is needed to reapproximate the tissues. The reason usually given for deferring the re-suture is that the raw surfaces are granulating and infected, and union therefore is not likely to be obtained. Smellie (1758) describes one such case:

"I was called by a midwife to a woman on the fifteenth day. The Perinaeum, Vagina and Rectum were tore into one about the length of two inches which prevented the retention of the faeces. The edges of the lacerated parts were beginning to skin over. I attempted with scissors to pare the edges, as in the hair lip; but could not possibly hold the parts so as to effect this purpose. I then armed a lancet, and with the point scarified them and with great difficulty made two stitches through the Vagina and Rectum and two in the Perinaeum; but in two days this brought on a large inflammation and the stitches all tore out. The parts digested and skinned over but did not cement or join together; however they contracted in such a manner that in three months after she could retain her excrements."

There is no doubt that these cases do look at first sight most unsuitable for early repair. The raw surfaces are covered with granulations, the tissues are friable so that the sutures tend to cut through, and the whole area is heavily contaminated with faeces.

On the other hand, and despite these objections, early re-suture is a practicable procedure; in the six cases I have seen during the past two years it has been employed, and proved a success. The operative difficulties are easily offset by the advantages gained by doing the operation at once.

Four of the patients had been delivered with forceps by their own doctors in nursing homes. The other two had been delivered with forceps in hospital by residents. In every case primary repair had been undertaken at once but had broken down within a week of delivery—in five of the cases completely, and in one partially so as to leave a recto-vaginal fistula. Two of the cases were pyrexial owing to a uterine infection.

In each case a secondary repair was undertaken as soon as it could be arranged—one 7 days after delivery, one 10 days, one 13 days, one 15 days, one 3 weeks, and one 4 weeks. In the two pyrexial cases operation was delayed

until the acute uterine infection had subsided. During the few days before operation the raw surfaces were kept as clean as possible, but otherwise no special treatment was given. Five of the repairs were done personally; the sixth was done by Miss M. Mayeur, F.R.C.S., on one of the hospital cases.

Every case healed well and gave no more trouble than the usual complete-tear repair. Complete control and healing were established within two weeks of undertaking the repair. The convalescence of one of the pyrexial cases was complicated by repeated secondary haemorrhages from the uterus. Despite the patient's poor general condition and the need to treat the haemorrhage by firm vaginal packing, the perineum healed normally.

The operation calls for no special technique, although good operative conditions are essential. It is neither possible nor desirable to coapt the skin of the perineum very closely, with the result that the appearance of the perineum at the end of the operation is not artistic. No special attempt need be made to clear the granulations from the raw surfaces, but most are in fact cleared away by the manipulations employed in defining the rectal mucosal edges and the ends of the torn sphincter. Great care must be taken to free the rectal and anal mucosal flaps completely from the underlying tissues. This should be done so freely that the two edges of the mucosa fall into apposition even before the sutures are inserted. As in all these repairs, special care must be taken to close the upper end of the rectal tear. After dealing with the mucosa the perineal body is repaired and the sphincter restored in the usual way. Little or no trimming should be done, even at the expense of leaving an irregular suture line. Interrupted stitches should be used throughout—No. 2 plain catgut for the rectum and deep tissues, silkworm-gut for the perineal skin. A short split-tube rubber drain is an advantage, left in the recto-vaginal space and brought out through the centre of the perineum, and remaining in position for two or three days.

While the object of this note is to draw attention to the possibility of early re-suture, reference may properly be made to the likely causes of the failure of the initial repair. The immediate technical fault in most of these cases is certainly the failure to suture the upper end of the mucosal tear. When the repair breaks down the disruption usually takes place from above downwards; first a recto-vaginal fistula appears, and then the whole wound "gives," the skin perineum last. There is no doubt that this primary failure in technique is due to the difficulties caused by poor operating conditions, uterine haemorrhage obscuring the field, and perhaps the strain of the antecedent forceps delivery. Many, if not most, of the failures would be avoided if it were the rule to defer the primary repair of complete tears for 12 to 24 hours after delivery, until better conditions and perhaps better assistance can be obtained.

REFERENCE

Smellie, W. (1758). *Collected Cases*, 2nd ed., 3, 320, B. Wilson, London.

Medical Memoranda

A Case of Compressed-air Illness

Compressed-air illness, more commonly known as "bends," is a disease familiar to all divers, airmen, and medical officers associated with this work. The present great increase in altitude flying and underwater work has revived interest in this formerly limited industrial disease. Briefly, it has its origin in a dangerous and excessive release of pressure of air, which causes the tissues to become supersaturated with nitrogen and bubble formation to occur. These bubbles may appear in the circulating blood and cause pulmonary embolism; in the vicinity of joints or muscles, causing the most common syndrome of "diver's bends"; or in the central nervous system, causing coma, confusion, cerebral palsies, and various types of myelitis with paralysis of limbs and incontinence. Symptoms vary enormously, depending on the site of formation or lodgment of the bubble. As fat dissolves far more nitrogen than water, the occurrence of bubbles in the central nervous system is not a