



CAESAREAN SECTION SCARS

by

L.O.S. Poidevin, M.D. (Adel), M.B.B.S. (Syd)
(ad eundum - Adelaide)

A THESIS

submitted to the

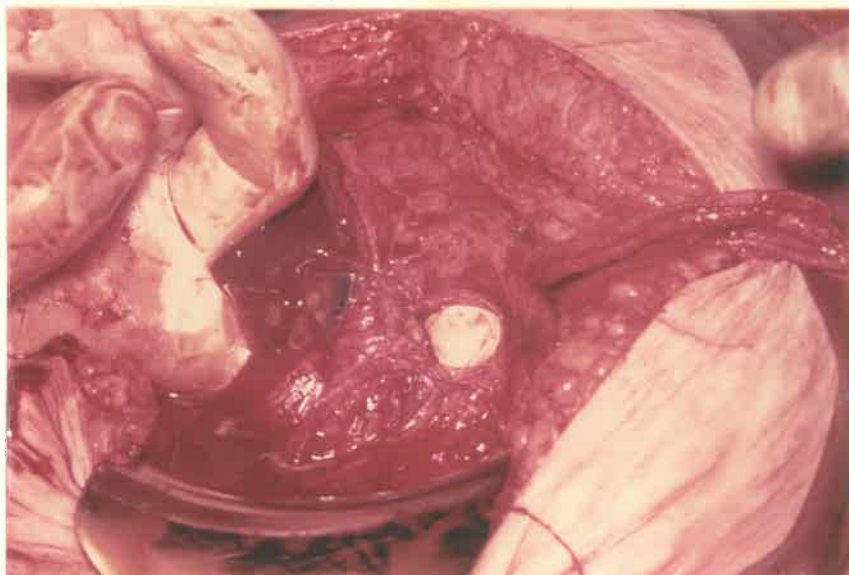
UNIVERSITY OF ADELAIDE

for the degree of

MASTER OF SURGERY

1964.

FRONTISPIECE



Uterine scar defect

Case M.V. - Q.V.M.H. 11664

Editorial comment in British Medical Journal,
9th July, 1960 on

"Report on Confidential Enquiries into Maternal
Deaths in England and Wales. 1955 - 57."

H.M.S.O. London 1960.

"Rupture of the uterus killed more
women (33) than did anaesthesia (31).
There is a tendency to regard this
accident as a thing of the past and
it is salutary to see a special section
of the report devoted to it. For
every fatal case of ruptured uterus
there must be many non-fatal ones."

TABLE OF CONTENTS

<u>Page</u>	
1	Frontispiece
2	Title page
3	Table of Contents
4	List of Illustrations
10	Introduction
14	Requirements of regulations 2 and 5 of the degree of Master of Surgery, University of Adelaide
17	Historical Review and Present Day Situation
41	Uterine wound healing
48	Animal experiments concerning uterine wound healing
66	Significance of animal findings and the human problem
70	Hysterographic method of examination - history and description
76	Clinical studies - Early studies Later studies Results Discussion
106	Conclusion
113	Appendices
127	References
132	Publications

LIST OF ILLUSTRATIONS

- Fig. 1 Opening the left horn of a cat's uterus.
- " 2 Delivery of a kitten.
- " 3 The horn emptied.
- " 4 Decidual inclusion suture.
- " 5 Decidual exclusion suture.
- " 6 Sketch of inclusion suture.
- " 7 Sketch of exclusion suture.
- " 8 Omental adhesions to wire sutures.
- " 9 Omental adhesions to linen sutures.
- " 10 Induced abscess alongside one healing horn.
- " 11 Healing in uterine horn 3 weeks after hysterotomy.
- " 12 Higher power of Figure 11.
- " 13 Healing at 5 weeks after hysterotomy.
- " 14 " " 6 " " "
- " 15 " " 8 " " "
- " 16 " " 10 " " "
- " 17 Excellent healing seen at 8 weeks.
- " 18 Healing as seen at 9 weeks.
- " 19 Perfect healing at 8 weeks.
- " 20 Higher power of Figure 19. Note revascularisation.
- " 21 Linen thread in the wound.
- " 22 Higher power of Figure 21 to show foreign body reaction.

- Fig. 23 Endometrial inclusion resulting from a decidual inclusion suture. Note deficient vascularisation.
- " 24 Higher power of Figure 23.
- " 25
- " 26
- " 27
- " 28 Various degrees of endometrial inclusions in the uterine scars following decidual inclusion sutures.
- " 29
- " 30
- " 31
- " 32 External endometrial deposits in a wound repaired with an all inclusion suture technique.
- " 33 Induced abscess alongside healing wound in uterus. (Right horn).
- " 34 Higher power of Figure 33 to show inflammatory reaction.
- " 35 Healing wound in left horn of same cat (G). Note absence of any inflammatory reaction.
- " 36 Healing in rabbit uterus during massive cortisone therapy - normal healing for tenth day after hysterotomy.
- " 37 Healing in rabbit uterus after 20 days of massive cortisone therapy. Note uterine healing apparently normal.
- " 38 Healing at 8 weeks in a cat. Note chronic catgut.
- " 39 Sound healing at 10 weeks. Chronic catgut unabsorbed, with very little or no surrounding reaction.

- Fig. 40 Excessive local reaction to plain cat gut.
- " 41 Silk suture in wound at 4 weeks.
- " 42 Site of wire suture (removed) - no local reaction.
- " 43 Higher power of Figure 42 - site of wire suture.
- " 44 Giant celled foreign body reaction to silk suture.
- " 45 Hysteroqram taken 6 months after vaginal delivery - anteversion.
- " 46 Hysteroqram taken 6 months after vaginal delivery - retroversion.
- " 47 Lateral view taken 8 months after lower segment caesarean section.
- " 48 Antero-posterior view showing the lateral widening so characteristic after caesarean section.
- " 49 Large deformity in anterior wall after a classical caesarean section - uterus in retroversion.
- " 50 The use of a sound demonstrates the position of the internal os in relation to the scar deformity.
- " 51
- " 52 A hysterectomy specimen showing high position of caesarean section scar - the operation had been done at 37 weeks, before labour.
- " 53 Repair of human uterus - demonstrating the decidual exclusion suture.
- " 54
- " 55) Examples of mild deformities.
- " 56)

- Fig. 57
- " 58
- " 59
- " 60
- " 61
- " 62
- " 63
- " 64
- " 65
- " 66
- " 67
- " 68
- " 69
- " 70
- " 71
- " 72
- " 73
- " 74
- " 75
- " 76
- " 77
- " 78
- Examples of moderate deformities.
- Examples of severe deformities.
- Examples of perfect healing -
no deformity.
- Examples of leaking scars demonstrating
sinus tracks.
- Case J.B., medium sized deformity -
lateral view, 1956.
- Case J.B., medium sized deformity -
A.P. view, 1956.
- Case J.B., 1960 - improvement following
neater technique in subsequent
caesarean section - lateral.
- Case J.B., 1960 - same - A.P. view.
- Case M.L., 1958 - moderate deformity -
lateral view.
- Case M.L., 1958 - moderate deformity -
A.P. view.

- Fig. 79 Case M.L., 1960 - improvement after next caesarean section - lateral view.
- " 80 Case M.L., 1960 - same - A.P. view.
- " 81 Case A.T., 1958 - moderate deformity.
- " 82 Case A.T., 1960 - some improvement after neater technique.
- " 83 Case M.V., large sinus from left end of scar area - 1957.
- " 84 Case M.V., 1959 - demonstration of "window" with rolled edges at the next caesarean section - left end of wound.
- " 85 Case V.L., 1959 - moderate deformity with sinus - right end of wound.
- " 86 Case V.L., 1959 - same - lateral view.
- " 87 Case V.L., 1960 - large "window" seen at next caesarean section.
- " 88 Case D.W., 1956 - severe deformity in anterior cervical and lower segment regions.
- " 89 Case D.W., 1958 - specimen of uterus ruptured through anterior lower segment region.
- " 90 Case R.C. Severe deformity in scar area with filling defect.
- " 91 Case R.C. Same - lateral view - granuloma in wound.
- " 92 Case R.C. Hysterectomy specimen - arrow points to sinus opening.
- " 93 Case R.C. Unopened specimen, hystero-graphy demonstrates the sinus track.
- " 94 Case R.C. Granuloma containing much cat gut in very thin scar - ? any real union.

- Fig. 95 Case R.C. Close up view of granuloma in the scar, with undigested cat gut seven months after the caesarean section.
- " 96 Case K.K., 1962 - Severe deformity, note smooth outline and no leakage of lipiodol.
- " 97 Case K.K. Same - lateral view.
- " 98 Case K.K. Sketch made at operation, 1964, showing large dimple in old scar area on the left.
- " 99 Human uterus, endometrial cyst and other endometrial inclusions in caesarean section scar.
- " 100
- " 101
- " 102 Various degrees of endometrial glandular inclusions in old caesarean section scars, found in hysterectomy specimens.
- " 103
- " 104
- " 105
- " 106 Stromal deposit in caesarean section scar of hysterectomy specimen.
- " 107 Higher power of Figure 106.