COMBINED RECTAL AND UTERINE PROLAPSE

by

Rohit V. Bhatt, M.D., D.C.H.,

Gynaec. Registrar, Department of Gynaecology & Obstetrics, K. E. M. Hospital, Parel, Bombay - 12.

Introduction

Combined rectal and uterine prolapse is an uncommon if not a rare condition. Reference to the standard books on Surgery and Gynaecology and journals published in English literature revealed only a few cases of this type. Surgical books, like Aird, Gabriel, Rose and Carless, Love and Bailey, do not make any reference to such a condition. Books on Gynaecology, like Masani, Shaw, British Gynaec. Practice, Back and Rosenthal, etc., are also silent on the above condition. Gabriel writes that he has operated on 64 cases of complete rectal prolapse out of which 55 were in females. He has not mentioned as to how many patients had associated uterine prolapse. Hughes reports another large series from St. Marks Hospital which is considered as the Mecca for rectal surgery. He mentions that there were 426 cases of rectal prolapse in St. Marks Hospital from 1911-1947. Out of these 85% (231) were in females. He does not mention whether there was associated uterine prolapse in any of them. Recently, Golighar has reported 23 cases of rectal prolapse out of which 19 were in females. There is no mention if any one of them had uterine prolapse. Referring to the literature in Gynaecology, we went through articles covering large series of procedentia (Van Couver, Smith, Tyrrone, Satur and Chakravarti, Tampan etc.) but no reference could be had on combined rectal and uterine prolapse.

Following are the only references, we could find, of combined rectal and uterine prolapse. Malpas mentions that he has seen about 20 cases, Dickson Wright has reported four cases, Phaneuf has reported four cases, Pemberton has reported one case, Broglio one case, Munsif one case, Krishnan two cases, Adhia one case (personal communication). Thus only 30-35 cases could be found in recent literature.

After covering the possible literature the impression was that combined rectal and uterine prolapse is a condition neglected or overlooked both by gynaecologists and surgeons. The paucity of literature on this subject encourages us to report five cases of this type.

Case Reports

Case 1: V.R., a Hindu female aged 30 years, was admitted in the Gynaecological Ward of the K.E.M. Hospital on 9-8-55 with the complaint of something coming out per vaginam as well as per rectum. The uterine prolapse was the first to appear and rectal prolapse followed two

years later. She had no urinary complaints. The rectal prolapse used to appear on straining at defaecation, and disappeared on lying down. Her menstrual history was normal. She had five full-term normal deliveries. There was a second degree perineal tear after first delivery. On examination she had cystocele, second degree uterine prolapse and a complete rectal prolapse. The rectum was seen 2½ inches outside the anal margin. There was no growth or haemorrhoids in the rectum. The tone of the anal sphincter was fair. Graham's operation was done for rectal prolapse. Anterior colporrhaphy with posterior colpo-perineorrhaphy was done for uterine prolapse. She had an uneventful recovery. She was advised against future pregnancy. Nevertheless, she was admitted with full-term pregnancy and labour pains one year after the repair operation. She was not allowed to deliver per vaginam and caesarean section was done. Fallopian tubes were also ligated. The baby weighed 7 lbs. and 4 ozs. She had no recurrence of prolapse when seen in August 1959.

Case 2: S.D., a Hindu female aged 80 years, was admitted in the Gynaecological Ward of K.E.M. Hospital on 26-12-58. She had uterine prolapse of 15 years' duration. She had a rectal prolapse which, according to her, was of one year's duration. The patient had senile dementia and so the history cannot be very reliable. She had five full-term home deliveries. Last delivery was 40 years ago. On examination she had a complete rectal prolapse which was reducible. Anal sphincter had no tone. Three fingers could be easily introduced. The rectum was prolapsing for 3 inches outside the anal margin. She had no haemorrhoids or rectal growth. Surprisingly enough she had no faecal incontinence. She had a complete procedentia uteri. There were patches of pigmentation on the vaginal wall. She had no trophic ulcers. Length of uterine canal was 2½ inches. She was confined to bed for most of the time. She could not stand or walk without support. Her blood pressure was 140/80 mm. Hg., haemoglobin 50%, blood urea 11 mgm.%. Urine examination showed a few pus cells and trace of albumin. Intravenous pyelography showed normal kidney function and she had no bladder stones. There was no evidence of hydronephrosis or hydroureters. She was prepared for the operation and LeForte's operation with tight perineorrhaphy was done on 24-1-59. She was rather unco-operative and used to remove the dressings. Her perineal wound got slightly infected. Fortunately she had no prolapse of rectum or uterus when seen 6 weeks after the operation.

Case 3: S.S., a Hindu female aged 35 years, was admitted in the Gynaecological Ward of the K.E.M. Hospital on 15-1-59 with rectal prolapse of 15 years' duration and uterine prolapse of 5 years' duration. She had no urinary complaints. She had 8 full-term normal deliveries. Last delivery was 1½ years ago. On examination she had marked cystocele, and first degree uterine prolapse. She had mucosal prolapse of the rectum which appeared on straining. Mucosa was prolapsing for one inch and could be easily rolled between the fingers. She had no haemorrhoids or growth in the rectum. Tone of anal sphincter was good. Anterior colporrhaphy with tight perineorrhaphy was done one week after the admission. She had an uneventful recovery. She was discharged on 11th post-operative day. When seen 6 months after the operation, she had no recurrence of cystocele or uterine prolapse but her mucosal prolapse of the rectum had recurred.

Case 4: We are not in a position to give details of this case as the history papers are not traceable. She was a Muslim female, aged 50 years, admitted in the Gynaecological Ward of the K.E.M. Hospital in September 1950. She had a combined rectal and uterine prolapse. She was in a low state of general health. Surgical Unit was consulted for opinion. They advised repair after the general condition improved. She was being built up in health when she got bored of her existence and committed suicide by jumping from the first floor of the hospital.

Case 5: E.D., a Christian female aged 60 years, was admitted in the Gynaecological Ward of K.E.M. Hospital on 12-10-

1959 with the chief complaint of something coming out per vaginam for 5 years and something coming out per rectum for 6 years. She was menopausal for 10 years. She had two normal deliveries. Last delivery was 25 years ago.

The rectal prolapse was complete and it was coming out for 5 inches below the anal margin. It was reducible. The anal sphincter admitted two fingers. There was no growth or haemorrhoids in the rectum.

The uterine prolapse was reducible in the beginning but for last 2 years it could not be reduced. It had multiple trophic ulcers. The edges were indurated and the ulcers were very friable. The ulcers invaded the vulva also. The uterine prolapse could not be reduced even under spinal anaesthesia. It was a complete procedentia. Her urine examination showed plenty of red blood cells and albumin ++ +, urea nitrogen was 10.5 mgm. On intravenous pyelography there was hydronephrosis both sides and no evidence of radio-opaque calculus was seen. Her x-ray chest was normal. Biopsy from the trophic ulcers showed changes of epidermoid carcinoma. Her haemoglobin was 48%. Her general condition was fairly good. She was undergoing building up treatment but she could not tolerate high protein diet. She developed diarrhoea, vomiting and marked abdominal distension.

The operation of exenteration with vulvectomy was contemplated but she went downhill. Her non-protein nitrogen rose to 77 mgm. She developed neck rigidity on 29-10-59. C.S.F. was normal. She expired the next day on 30-10-59.

Discussion

It is likely that the paucity of literature on this subject may be due to incomplete records of the patients. Some patients with rectal prolapse may be having first or second degree of uterine prolapse which may not have been noticed. Complete rectal prolapse is more common in females as compared to males. Moreover, incidence of uterine prolapse is more in women who have suffered the strain of parturition than in women who have never borne children. Thus there is reason to believe that there may be a common aetiology for the development of rectal and uterine prolapse. One does not know whether it is the weakness of the pelvic floor that is responsible for the combined prolapse or whether it is the weakness of the pelvic fascia with its ligaments. Weakness of the pelvic floor per se does not appear to be the sole cause as in cases of procedentia uteri we see very wide hiatus urogenitalis but still there is no associated rectal prolapse. We see fair number of cases of uterine prolapse in gynaecological wards. If there was really a common aetiology for rectal and uterine prolapse, we should see fair number of cases of rectal prolapse also. But it is seen from the literature that the combined prolapse is not common.

Aetiology

In spite of remarkable progress in surgery of genital prolapse, the aetiology of genital prolapse is not finalised. Opinions are still divided whether it is the pelvic floor that is responsible for the support of the uterus or it is the uterine ligaments that are responsible. Pacey was the strong supporter of the former concept. Fothergill did not much recognise the value of pelvic floor musculature. He believed that ligaments of the uterus play important role in supporting the uterus. He actually used the Mackenrodt's ligaments as a support in repair of the prolapse. Gradually, the arguments on both sides seem to come to a compromise. It is agreed that the function of pelvic floor musculature and uterine liga-

ments are complimentary, and weakness of any one of them may lead to uterine prolapse. By initiating the study of levator myography Berglass and Rubin have opened a new chapter in the aetiology of genital prolapse.

Following have been mentioned as the probable causes of rectal prolapse. Acute fevers, diarrhoea, haemorrhoids, too much straining efforts, irregular bowel habits, damage to pelvic floor, abnormally deep recto-vaginal pouch, lack of fixity of the posterior rectal wall to sacrum, absence of sacral curvature and congenital weakness of the pelvic floor are other probable causes. It was Moscowitz (1912) who first established that rectal prolapse was a sliding hernia where pouch of Douglas herniates into the anterior rectal wall and the posterior rectal wall passively follows. This monumental clinical observation of Moscowitz is amply confirmed during clinical examination of rectal prolapse. After reducing the rectal prolapse if the two fingers are kept passed on the anterior rectal wall, the rectum does not prolapse; but if the fingers are kept pressed on the posterior rectal wall rectal prolapse occurs when the patient is made to strain.

Recently, Todd has come forward with a new concept for the development of rectal prolapse. He believes that the puborectalis sling is lax so that the two levator ani muscles on either side do not unite with rectal musculature and so there is a sort of devarication of pubo-coccygeous muscles. This allows the rectum to be pushed back towards the sacrum. This increases the recto-vaginal space which makes it vulnerable and rectal prolapse results. Todd advises reformation of the puborectalis sling by suturing the two levator ani muscles behind the rectum. There seems to be force in Todd's argument. If this proves to be correct it may change our concept about the principles of treatment of rectal prolapse.

Gabriel writes that in females child-birth trauma to the pelvic floor is responsible for the development of rectal prolapse. Hughes has presented convincing figures from St. Mark's Hospital which contradict Gabriel's assumption. He believes that the incidence of rectal prolapse is relatively high in women who have never borne children. He further says that occasional patients have attributed prolapse to a confinement and have believed prolapse to be aggravated by subsequent pregnancies.

Let us draw some conclusions before one gets lost in the realms of aetiology of this condition. It is worth noting the variation of incidence of rectal prolapse in our country as compared to the West. The incidence of rectal prolapse in the Western literature is 6 females to one male. Moreover, rectal prolapse when it occurs in females comes late in life whereas in males it occurs earlier. It is surprising to find that the incidence of rectal prolapse in females in our country is much lower and is definitely less than in males. Munsif has reviewed 31 cases of rectal prolapse out of which 22 were in males and only 9 were in females. When I approached prominent surgeons in Bombay they said that they had seen very few cases of rectal prolapse in females whereas they came across many cases of rec-

tal prolapse in males. It is difficult to explain this variation in sex incidence in the East and the West. The above figures rule out child-birth trauma to the pelvic floor as the aetiological cause for the rectal prolapse, because if it was so the incidence of rectal prolapse in our country should have been higher than in the West for obvious reasons.

Though our series is very small for any conclusions to be drawn, we would like to venture to give our views if arm-chair thinking is permitted. We believe that there is no common aetiology for the development of rectal and uterine prolapse. Each condition arises separately without being affected by the presence of the other. If there was really a common aetiology there should have been more cases of combined prolapse which is not borne out by facts. Statistics from St. Mark's Hospital certainly rule out child-birth trauma to the pelvic floor as the common aetiology. We believe that combination of rectal and uterine prolapse is just a coincidence. The proximity of these two pelvic organs do not seem to affect each other. A woman with uterine prolapse is as much susceptible to get a rectal prolapse as she is to any other lesion such as acute appendicitis or intestinal obstruction.

If Hughes' observation is correct that rectal prolapse in females comes late in life, it is likely that men in our country outlive women and so many women do not live to ripe old age when they can get rectal prolapse. This is just one opinion.

Management

The problem of management becomes very simple if it is agreed that rectal prolapse and uterine prolapse are two different conditions with different aetiologies. The surgeon should treat the rectal prolapse and the gynaecologist should treat the uterine prolapse. There should be a close association between a surgeon and a gynaecologist. The line of treatment should be jointly decided by both. Gynaecologist should not try to repair rectal prolapse and vice versa unless he has sufficient experience with such operations.

The management will be simplified if discussed under three heads:

(1) When the main feature is a uterine prolapse but there is also associated mucosal prolapse of the rectum.

(2) The patient has a complete rectal prolapse but there is associated cystocele or first and second degree of uterine prolapse.

(3) When the patient has complete rectal and uterine prolapse. These are usually old and debilitated patients and some of them are poor surgical risks.

The important points to be considered before deciding the line of treatment are age of the patient, need for preserving menstrual and child-bearing function, condition of the anal sphincter, degree of prolapse and general condition of the patient. There are many operations described for the repair of the uterine as well as rectal prolapse. Dickson has mentioned some 50 methods for the repair of rectal prolapse.

(1) Type of cases where the main feature is a uterine prolapse but there is also associated mucosal prolapse of the rectum.

In these cases the uterine prolapse should be treated in a standard way. If there is only first degree prolapse then anterior colporrhaphy may suffice but if there is second or third degree prolapse Fothergill repair, Shirodkar repair or Cervicopexy should be done. Radical operation like Mayo-Ward repair should be reserved for patients in menopause or nearing menopause. The mucosal prolapse may be treated in one of the following ways. Routine perineorrhaphy suffices in a few cases. It is doubtful if perineorrhaphy alone is sufficient to cure mucosal prolapse. Mucosal prolapse may recur within a short time as it did in our third case. The injection of sclerosant solution is another way to treat mucosal prolapse. Mucosal prolapse may also be treated by excision of the prolapsed mucosa.

(2) Type of cases where patient has a complete rectal prolapse but there is associated cystocele or first and second degree uterine prolapse:

There are three operations for complete rectal prolapse that have stood the test of time. They are Roscow Graham's operation, Muir's anterior resection and Miles recto-sigmoidectomy. Other operations have been given up as of very little use. For the uterine prolapse the type of the operation will be decided by the degree of prolapse. Anterior colporrhaphy may suffice for cystocele with first degree prolapse. Fothergill repair, Shirodkar repair or cervicopexy may be done in second degree prolapse.

(3) Type of cases with complete rectal and uterine prolapse:

These are usually patients nearing menopause or in menopause. There is laxity of pelvic floor musculature. These patients are in low general state of health. In contrast to the above two types of cases, these patients tax the ingenuity and resourcefulness of the surgeon and the gynaecologist in deciding the line of treatment. The first two types of cases may be operated independently by the gynaecologists and the surgeons but in this third type of cases there must be a joint effort on the part of the surgeon and the gynaecologist. The line of treatment should be well planned. These patients are usually old, so menstrual and child-bearing function may be sacrificed. Some of these patients are poor surgical risks and not fit for major surgery. These are all the factors that must be considered.

Dickson Wright has devised a new method for the treatment of procedentia and complete rectal prolapse in the aged patients. He advises introduction of figure of eight silver wires with the loops encircling the anal and the vaginal orifices with wires crossing the perineum. This produces satisfactory results and allows them to "totter much more comfortably towards the grave".

LeForte's type of colpocliesis may be done for procedentia and tightening of the anal sphincter may be done by Thiersch's operation or tight perineorrhaphy. This was done in our second case. It is too early to look for the results.

Broglio advises two stage operation for the repair of combined prolapse. In the first stage, he does vaginal hysterectomy with conservation of adnexa. When the vaginal vault has healed he does the second stage where he opens the abdomen

and elevates the rectum. After the pelvis is well exposed, transverse incision 8 cms. in length is made through the peritoneum covering the area between the rectum and the bladder and the peritoneum is loosened from anterior rectal wall upward for 3 cms. The uterine end of round ligament is sutured to the anterior rectal wall and then round ligament itself is sutured to anterior rectal wall along the whole denuded area. This pulls the rectum up towards the left side of the pelvis. Round ligament is also sutured to the parietal peritoneum from internal inguinal ring up to the level of sacral promontary. Similar technique is used for the other side round ligament. The author has reported good results.

Pemberton has advised intra-abdominal fixation operation. Here the rectum and the sigmoid are mobilised and fixed to the pelvic and abdominal walls and the anterior rectal wall is sutured to the posterior surface of the uterus.

The operation now no longer favoured but which enjoyed some reputation once is proctopexy of Lockhart and Mummary. This procedure gave rise to severe infection in the retrorectal space. It had a higher recurrence rate. Hughes followed 33 cases of rectal prolapse operated by Lockhart-Mummary technique. The number of survivors was 29 and all had recurrences. If the observation that there is always an anterior rectal wall prolapse and the posterior rectal wall passively follows, the procedure of Lockhart-Mummary is unsound. Their technique aims at fixation of posterior rectal wall which is little altered from its normal relationship to sacrum.

Recto-sigmoidectomy enjoyed a longer stay. It was championed by Miles, Abel, Gabriel, etc. However, it received the final blow in 1949 when Hughes published analysis of 150 cases of rectal prolapse operated at St. Mark's Hospital by recto-sigmoidectomy. He found that 60-65% had recurrence. Out of these patients with recurrence more than half had anal incontinence, possibly because of the excision of the sensitive ano-rectal mucosa. Miles' recto-sigmoidectomy fails because it does nothing to correct underlying faults. Miles' recto-sigmoidectomy has been compared to tying the hernial sac in a case of direct hernia without repairing the defect.

There are two operations that are still performed and the recurrence rate is low. They are Graham's operation and Muir's anterior resection operation.

Golighar believes that Graham's operation answers to the three fundamental defects in cases of rectal prolapse. The three defects are: (1) abnormally deep pouch of Douglas; (2) lax and atonic pelvic floor musculature; and (3) lack of normal fixation of rectum to its bed. Golighar has published 23 cases of rectal prolapse operated by Graham's method with good results.

Muir found, while doing abdomino-perineal resection on patients who previously had anterior resection for cancer rectum, that it was extremely difficult to separate the site of anastomosis from sacrum and pelvic walls. This difficulty in separation was not due to invasion by original cancerous growth because the recurrence rate was small. Because of the firm adhesions round the site of anastomosis,

the thought that the operation of anterior resection may be useful in cases of rectal prolapse. Muir has done this operation on 8 women so far with good results.

Recently, Butler has devised a new operation for rectal prolapse in females. This is an abdominal operation. He excises the excess of the pouch of Douglas in two sections, care being taken not to injure anterior rectal wall. He does not bring the levator ani muscles as is done in Roscoe Graham's operation. The rectum is pulled up and sutured to posterior wall of vagina by interrupted thread or silk sutures. This reconstitutes new recto-vaginal septum. Ventro-fixation of the uterus is done. Some patients need perineorrhaphy. In some case if there is excess of recto-sigmoid, then he excises the excess portion. He has operated on 29 cases and has claimed fair results. It is too early to give any opinion till these patients are followed-up sufficiently long. But there is a feeling that ventro-fixation of the uterus is not desirable so far as menstrual and child-bearing function is concerned.

Lately there is a solitary case report by Bracey of a new technique for the repair of rectal prolapse. The main principle is to draw the sagging and separated pubo-rectalis muscles together and upwards by means of facial strips. The facial strips are taken from external oblique aponeurosis.

Summary

(1) Literature on combined prolapse is reviewed.

(2) Five cases of combined prolapse are reported.

(3) Aetiology of combined prolapse is discussed.

(4) Management of combined prolapse is discussed at length.

Acknowledgment

The author wishes to take this opportunity to thank the Dean, K.E.M. Hospital and Seth G. S. Medical College, Bombay, for allowing to publish the hospital records. I am also thankful to Dr. B. N. Purandare and Dr. V. N. Purandare, Honorary Gynaecologists, K.E.M. Hospital, for permitting me to report these cases.

References

1. Abel A. L.: Proc. Roy. Soc. Med.; 26, 1448, 1933 (cited by 18).
2. Adhia G. D.: Personal communication.
3. Aird I. N.: A Companion in Surgical Studies. 2nd ed., 1957, E. & S. Livingstone, Ltd., London.
4. Berglass B. C. & Rubin I. C.: S.G.O.; 97, 277, 1953.
5. Bracey D. W.: Proc. Roy. Soc. Med; 52, 387, 1959.
6. British Obstetric & Gynaecological Practice. 1st ed., 1955, William Heinemann, London.
7. Broglio: Am. J. Obst. & Gyn.; 26, 468, 1933.
8. Butler E. C. B.: Proc. Roy. Soc. Med.; 52, 385, 1959.
9. Dickson Wright: Proc. Roy. Soc. Med.; 42, 1005, 1949.
10. Gabriel W. B.: Rectal Surgery. 4th ed., 1949, H. K. Lewis, London.
11. Golighar J. C.: B. J. Sr.; 45, 323, 1958.
12. Hughes E. S.: Proc. Roy. Soc. Med.; 42, 1005, 1949.
13. Kenneth Pacey: J. Obst. Gyn. B. E.; 56, 1, 1949.

14. Krishnan R. G.: J. Obst. & Gyn. Ind.; 6, 155, 1955.
15. Love and Bailey: A Short Practice of Surgery. 10th ed., 1956, H. K. Lewis Ltd., London.
16. Malpas P.: Genital Prolapse and Allied Conditions. 1st ed., 1955, Harvey & Blythe Ltd., London.
17. Masani K. M.: A Text Book of Gynaecology. 2nd ed., 1957, Popular Book Dept., Bombay.
18. McLeod D. H. & Read C. D.: Text Book of Gynaecology. 5th ed., 1955, J. & A. Churchill Ltd., London.
19. Moscowitz A. V.: S.G.O.; 15, 7, 1912 (cited by 11).
20. Muir E. G.: Proc. Roy. Scc. Med.; 48, 33, 1955.
21. Munsif K. G.: Ind. J. Surg.; 14, 179, 1952.
22. Pemberton J. D. & Stalker L. K.: Annals Surg.; 109, 799, 1939.
23. Phaneuf L. E.: S.G.O.; 77, 209, 1943.
24. Rose and Carless: Text Book of Surgery. 18th ed., 1954, Bailliere Tindal and Cox, London.
25. Shaw Wilfred: Text Book of Gynaecology. 6th ed., 1952, J. & A. Churchill Ltd., London.
26. Smith G. V. S., Graves W. P. & Pember F. A.: Am. J. Obst. Gyn.; 17, 669, 1929.
27. TeLinde R. W.: Operative Gynaecology. 2nd ed., 1953, J. B. Lippincott Comp., Philadelphia.
28. Todd I. P.: Post-graduate Med. J.; 35, 97, 1959.
29. Tyrrone C. H.: Ann. Surg ; 145, 963, 1957.
30. Van Cour B. C.: Am. J. Obst. Gyn.; 38, 489, 1939 (cited by 26).

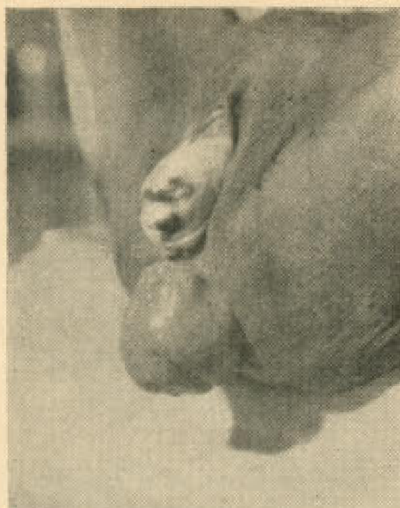

Fig. 1

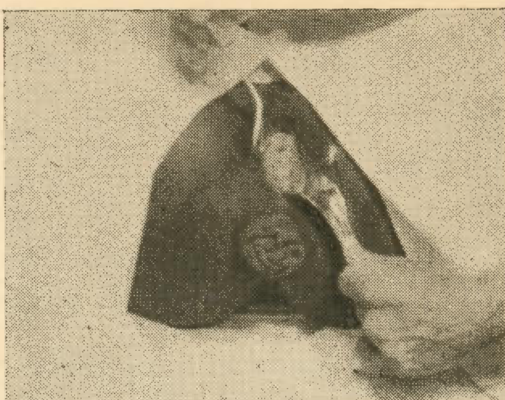

Fig. 2

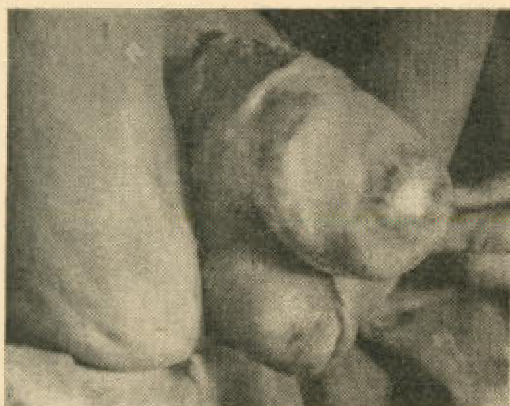

Fig. 3