A remarkable case in the history of obstetrical surgery: a laparotomy performed by the Dutch surgeon Abraham Cyprianus in 1694

Erwin J.O. Kompanje

Erasmus Medical Center Rotterdam, Department of Neurological Surgery, Dr Molewaterplein 40, 3015 GD Rotterdam, The Netherlands

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Abstract

In 1700 the Dutch surgeon/medical doctor Abraham Cyprianus (1655/1660–1718) published his Epistola historiam exhibens foetus humani post XXI. menses ex uteri tuba, matre salva ac superstite excisi, a 94-page book in which several remarkable case histories are described and illustrated. The most spectacular case in the book is the accurate and detailed description of the delivery of a dead full-term child (ectopic tubar pregnancy) by a laparotomy he performed in a living woman in December 1694. The woman survived the operation and gave birth to three more children in following years. This remarkable, well-considered, brave and life-saving operation, performed in a time without antisepsis and anaesthesia in a domestic situation is seldom mentioned by medical historians describing the history of obstetrics. This particular case is reviewed in this article.

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1. Introduction

In 1700 the Dutch surgeon/medical doctor Abraham Cyprianus (1655/1660–1718) published his Epistola historiam exhibens foetus humani post XXI. menses ex uteri tuba, matre salva ac superstite excisi, a 94-page book in which several remarkable case histories are described and illustrated with beautiful copper engravings [1]. The most spectacular case in the book is the accurate and detailed description of the delivery of a dead full-term child (ectopic pregnancy) by laparotomy he performed in a living woman in December 1694. The woman survived the operation and gave birth to three further children in the following years. This remarkable, well-considered, brave and life-saving operation, performed in a time without antisepsis and anaesthesia in a domestic situation is not [2–4] or only (very) briefly [5,6] mentioned in texts on the history of obstetrics. This particular case is reviewed in this article.

2. Biography of Abraham Cyprianus

Abraham Cyprianus (Fig. 1) was born between 1655 and 1660 in the city of Amsterdam. His father, Allardus Cyprianus (date of birth and death unknown), was surgeon (Chirurgijn) in Leeuwarden, and was famous for ‘cutting the stone’, surgery for vesicular calculi. Abraham obtained his surgeons master degree (Meesterproef) at the surgeon’s guild of Amsterdam on the 23 July 1680. Beside his training as surgeon he also studied medicine at an academic level, and obtained his doctor medicinae degree on the 22 November 1680 at the University of Utrecht on his thesis Dissertatio de carie ossis. He established his own surgical practice in Amsterdam, and was, as his father, famous for the surgical treatment of bladder stones. Frederik Ruysch referred to him as a ‘lithotomus expertissimus’. The postscript on his portrait (Fig. 1) states not without reason ‘Lithotomus Amstelodamensis ordinarius’. In 12 years of practice he performed about 1400 lithotomies. Between 1693 and 1695 Cyprianus was professor in Medicina theorettica et chymica at the University of Franeker in Friesland. Some years later Thomas Millington, the private physician of King-Stadholder Willem III, send for Cyprianus, in order to release Millington from a bladder stone. Beside the surgery on Millington, Cyprianus performed many other successful urological operations in England, consuming many English colleagues with envy. He became member of the Royal Society of London in 1700. Cyprianus died on the 16 April 1718 [7,8].
3. Case history

The original text of Abrahaemi Cypriani. m.d. Anatomie & Chirurgie in Academia Franequerana nuper Professoris. Epistola historiam exhibens foetus humani post XXI. menses ex uteri tuba, matre salva ac superstite excisi is written in Latin. The case history was also published in French as a letter in a book by Belloste [9] and as a separate edition [10]. Here I give my translation of the complete original Latin text:

‘On the 17th of December 1694 I was send from Franeker to Leeuwarden for Hermentie ten Boom, the wife of Hendrik Lewis, soldier at the company of captain Petersen. She was about 32 years of age and pregnant for the third time and in the ninth month, all signs were equal to the previous pregnancies with the exception that she wasn’t lactating. The present pregnancy was more difficult and troublesome than the earlier, especially when the child was moving; the most serious burden was formed by the position of the child, which was higher than the previous pregnancies. When the time of parturition had come, she suffered severe pain, while other signs of childbirth were lacking. She only experienced movements on an unusual place, but no single sign of delivery or amnion fluids.

At last all hope for a normal delivery vanished when the movements of the foetus ceased and when the well being of the woman improved, there was no further doubt that the foetus had died.

When the tenth month had gone by, a new period had started, no movements of the child were noticed, but a heavy and unpleasant abdominal feeling had developed.

These feelings progressed by the day, and by the 18th month the situation was so serious, that the woman had to keep bed. Shortly after she started complaining about severe pain near her umbilicus. Two weeks before the extraction of the foetus, a fungous ulcer appeared near her umbilicus.
Several surgeons and physicians were consulted, each one having his own opinion about the case.

Some of them thought, that the foetus was intra-uterine, others disagree, some thought of hydrops abdominalis, others of an internal tumor. In the 20th month of the pregnancy, I was send for consultation in Leeuwarden with my colleague Petrus Latané, medical practical professor, accompanied by some students of the Franeker Academy, who witnessed together with the court physician of the Prince van Oranje and surgeon N. Simonides this operation, which is seldom performed in the clinic, and which, above all, had a good outcome.

After I had examined the patient and all other circumstances, as well as the status preasens as well as the previous history, I didn’t doubt to declare that the child was dead, neither all signs were absent, which confirmed my opinion. Let me repeat everything: a tumor in the lower abdomen, which lead to a point a little lower, moreover, when I pushed the abdomen with both hands I discovered a large solid tumor, which extended to the peritoneum. This solid tumor was also felt near the fungeus ulcer, in which easily a stiletto was introduced, besides I bumped on something hard. After I had widen the ulcer sofar, that I could introduce my little finger, I had no further doubt that I could feel and reach the parietal bone of the foetus. Based on these findings, I became less fearless and declared, that the foetus was in the right Fallopian tube, and I pointed out to the woman, that the only hope on a good outcome was to perform a caesarian section, and if she would consent to such a procedure, otherwise a miserable death would become her part.

Because she refused to eat any food and she felt death to come, she consented to my proposal and declared to be prepared to suffer, if she could freed of the dead child in her abdomen.

After everything was prepared for the operation, I ordered to place the bed with the woman in the center of the room, so that there was enough space for those who would help me with the operation, but also for those who would see the new spectacle.

And this should be a casual remark: seen my habit not to perform important surgical procedures with a bent back or in sitting position, but straight up, I ordered to place the bed in such height, that I could easily perform the caesarean section. As such I continued.

After I had introduced a stiletto in the ulcer, I opened the abdomen on the right side and put in my forefinger. After I was assured that I had found the cavity of the Fallopian tube in the near distance of the linea alba, I made, after I introduced a forceps guided by my finger, an downward incision, as large as was possible in one time. At that time a child of normal appearance was discovered. To extract the child without any difficulty, I extended the incision on both sides to the length of a foot and after I had shoved away the intestines with my left hand, because they would have hindered the operation with the movements of the diaphragm, I extracted the child without any difficulty and unharmed. As a precaution, and to prevent the intestines to slide down, I had placed the woman in such a position that the upper part of her body lied a little lower than the lower part. The woman stayed in this position till her recovery, with reason to prevent a gaping of the wound. After the incision was made, first the head was discovered, the feet pointed to the diaphragm.

In the center of the placenta, which was thin and mostly decomposed, was an umbilical cord, which was attached to the Fallopian tube, as I discovered later, when I prized it off with my fingers. The cavity of the Fallopian tube was filled with some sort of slime, resembling purulent matter. After more precise inspection, it became clear that it wasn’t purulent matter, but amnion fluid, because no part of the interior of the Fallopian tube was ulcerated and the matter was in no way fetid. After the child was extracted from the cavity, this showed itself as a large wide open purse. I troubled myself with this, to show the spectators, that this part, from which I extracted the child, was so much fused with the peritoneum, that it appeared as one membrane, and that the lower part of this sack was fused on the right side with the uterus near the fundus, and that this was the normal place of the Fallopian tube, and as there wasn’t any sign of this tuba, it was clear that the child had grown inside the right Fallopian tube.

The opportunity to examine and feel the uterus, I could show my spectators to my gratification that it appeared in a normal state with a left ovarian and Fallopian tube in normal condition. As I had seen this, I predict, and not on false grounds as later became obvious, that the woman, in case she recovered, would be able to become pregnant again.

But let us end: I had taken a sponge, wetted with tepid water, and brought it into the cavity and wiped away all the slime. After that I sutured the cleaned wound with a sharp curved needle on four places at regular distances, while I had taken skin, muscles and peritoneum at the same time. I used a double, waxed thread, and to fasten it more solid, I place on both sides a wooden strip covered with linen, as the openings would close in a better way, and I tightened the thread over these strips, but not to tight. The patient told me that these sutures gave her more pain than the whole operation, during which she had not complained about any serious pain. Then I left the wound open at the lower end, in order to let out all foul matter.

After the operation had come to a good end, I ordered soft liquid food and after I had agreed with the surgeon N. Simonides, who treated the patient, about the follow-up treatment, I left the care to him. The patient had gone along without any sign of the princess, the patient received food from the royal kitchen every day. I have visited the patient often and as far necessary and examined the wound which healed in a natural
way, namely concerning the excrete of the internal part of the Fallopian tube. What was excreted not only flowed from the lower opening of the wound, but also through the openings between the sutures. The Fallopian tube excreted not totally, but only the inner membrane. The outer part contracted slowly, and got fused with the place of the incision, this fusion resembles cartilage, as I could feel with my finger, when the wound was not completely healed.

So, this woman is healed from a caesarean section like operation: in the third month after the operation, on 17th March 1695, she was able to come out of her bed. She felt good, and lived cheerful and happy. In order that nothing be absent in this peculiar case, at last could be mentioned, that on the 16th January 1696 she delivered a healthy daughter and the next year a twin, a boy and a girl, which is the best proof, that, as I predicted, the left Tuba was unharmed and free from inflammation. As proof I am willing to show the foetus, which I extracted 15 years ago and still keep preserved in liquor balsamicus, to anyone curious, and to those who are keen to see novelties. By this I enclose an engraving. It was a girl of normal length as I have said before. It is a miracle, that this corpse in twelve months without any putrefaction was hidden in the Fallopian tube, seen the fact that the entire body was unharmed with exception of some parts on the left side of the head and shoulder, affected by the pus of the ulcer, in which nearness it had been“.

The original case report is illustrated by a folding engraved plate depicting the delivered dead child. This plate is reproduced in Fig. 2.

4. Discussion

The only reason for a laparotomy in obstetrics in the 17th century was to perform a caesarean section in a deceased woman in order to save the life of the unborn child or to be able to baptises the dead child. This operation has a long history and tracing back to antiquity. Conducting such a dangerous operation in case of a dead child in a viable woman was considered foolish and irresponsible [11,12]. Mortality of the mother was almost 100% due to bleeding and infection. Surgical extraction of an ectopic pregnancy during life was also considered irresponsible. The risk of bleeding is much smaller in the case of a laparotomy for an extra-uterine ectopic pregnancy, but the risk of postoperative infection (peritonitis) was still a serious threat.

Abraham Cyprianus performed a laparotomy in a time without antisepsis and without anaesthesia at a patient’s home. His motto was “Nec temere, nec timide”, which means “Not thoughtless, not reserved”. This mentality is reflected in this case history. Cyprianus made the correct pre-operative diagnosis of tubar ectopic pregnancy of a full-term dead child, and then planned a careful surgical procedure. The only reason to perform the riskfull operation was to save the life of the woman.

Cyprianus was not the first surgeon to execute a laparotomy in case of an extra-uterine pregnancy in a viable woman. In 1549 the Viennese surgeon Dirlewang performed a laparotomy for the delivery of a 4-year standing ectopic pregnancy. The physician Mathias Cornax (born c. 1520) described and illustrated this early successful laparotomy in 1550 and 1554 [13,14]. Most probably this is the same case Pierre Boaistua described in his curious book *Histories Prodigieuses* in 1560 [15]. Boaistua described the case of Marguerite, the wife of George Walezer, who lived in the 16th century Vienna. This woman became pregnant in 1545, but when she went into labor she only felt sharp pain and fetal movements ceased. Five years later she persuaded a surgeon to open her abdomen and remove the litopedian child. This took place on 12 November 1550. Marguerite recovered and was full of life. The earliest documented case report of successful ‘caesarean section’ by a life woman is not performed by a surgeon of physician but by a pig-
butcher. In 1500 the wife of the pig-butcher Jacob Nüfer from Siegershausen in Austria was pregnant for the first time. At the time of delivery she suffered severe pain and ineffective labor. The 13 (!) consulted midwives and several ‘stone-cutters’ couldn’t help the poor woman. Nüfer decided that he could save the life of his wife by opening her abdomen on the same way he usually opens the bellies of his pigs (Tomotocie). After the first incision he could take out his child alive (Abdomi vulnus infigit; verum primo ictu ita feliciter abdomen aperuit, ut subito infants absque ulla laesione extractus fuerat’; [That through the first incision the abdomen could be opened on a way, that the child unharmed could be extracted]). He closed the abdomen of his wife on a way veterinarians used to do (Veterinario modo). The woman survived and gave birth to several more children. It seems plausible that this case also concerns the abdominal delivery of an ectopic pregnancy. The case is described in 1591 by Casparo Bauhino [16]. The French obstetrician Maygrier summarized in 1822 in his classic obstetrical work the ‘Caesarean section’ for extra-uterine pregnancy; he mentioned the case of Cornax and Bauhino, but not the cases described by Boaistuau or Cyprianus [17]. Loudon reviewed recently the case described by Boaistuau [18], but did not mention the cases of Cornax and Bauhino. Schreger mentioned in his chapter on ‘Der Bauchschmitt, Laparotomie’ several 18th and early 19th century cases [19]. Interesting is that Cyprianus mentioned that the pregnant woman wasn’t lactating. The famous French obstetrician Andre Levret wrote in 1750 that the lack of milk in the mammary glands was one of the reliable signs of ectopic pregnancy [20].

References

[18] Cyprianus A. Lettre, rapportant l’histoire d’un fortus humain de 21 mois detaché des trompes de la matrice sans que la mère en soit morte. Amsterdam; 1707.