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CESAREAN SECTION
SHAWNEE MISSION MEDICAL CENTER
MERRIAM, KANSAS
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00:00:09
ANNOUNCER: Tonight you will experience the miracle of birth during a live Internet broadcast from Shawnee Mission Medical Center in Merriam, Kansas. Over the next hour, operating surgeon Dr. Leah Ridgway will perform a caesarean section delivery while Dr. Reagan Wittek will provide expert commentary. Specialists in maternal fetal medicine and neonatology will also be on hand to answer viewer questions during the delivery. Or-Live makes it easy for you to learn more. Just click on the "request information" button on your webcast screen and open the door to informed medical care.
00:00:52
REAGAN M. WITTEK, MD: Greetings and welcome. We are coming to you live from the state-of-the-art operating room at Shawnee Mission Medical Center in Merriam, Kansas. Today we are happy to bring you quite a monumental event. Thanks to our wonderful patient who has agreed to share this day with us, we will be showing you a cesarean section delivery during this hour-long period. I am Dr. Reagan Wittek. I am an obstetrician with Shawnee Mission Medical Center and your host for the program today. We will be joining Dr. Leah Ridgway, who will be performing the surgery in just a few moments. But first, let me introduce my colleagues who have joined us for this webcast. Next to me I have Dr. Elizabeth Wickstrom, who is a maternal-fetal medicine specialist. And next to me on the other side is Dr. Jodi Jackson, who is a neonatologist. Dr. Wickstrom and Dr. Jackson are here to provide expert commentary and to answer any viewer questions that come up later in the program. To send us your questions at any time during this broadcast, just click on the MDirectAccess button on your webcast screen. We welcome your questions and comments and will try to get to all of them throughout the program. Also, we will archive this program and it will be available to you through this website at any time. Please join us later if you prefer. Now let me turn things over to the obstetrician performing the delivery to tell us more about the patient. Dr. Ridgway?
00:02:28
LEAH D. RIDGWAY, MD: I'm Dr. Leah Ridgway, and we're here today with our patient Kristen to deliver her baby by caesarean section. Before we get started, I want to look around the room and introduce you to the other staff that's here today to help us. We have Dr. Dan Mitchell, who's the anesthesiologist. We have Kelly, who's the nurse anesthetist back here. We have Dr. Ana Martinez, who's one of my partners, who's going to be assisting me. We have Aubrey, who's the scrub technician who's going to be helping out. We have Carrie back here by the warmer, who's the neonatal nurse practitioner. And we have Angela, who's the nursery nurse who's going to be helping with the baby. And then our circulating nurse is Chris. So those are the people who are going to be helping us out in the OR today.
00:03:16
Prior to coming back to the operating room, Dr. Mitchell established a regional anesthetic on Kristen so that she could be nice and comfortable during the procedure. Kristen has an epidural spinal combination anesthesia for her anesthesia tonight, which provides a nice comfortable block for her and should make this a really comfortable experience for her.

Kristen's having a repeat cesarean section because she had to have a cesarean section with her last delivery. Other common reasons for cesarean sections are when we can tell that the baby's just not tolerating labor and we see evidence of fetal distress. Sometimes when labor is going slowly or stalls out and we can tell that the baby's just not going to fit through the birth canal, that's another common reason for cesarean section. Other less common reasons are things like umbilical cord prolapse and placenta previa.
00:04:14
Before we get started, I wanted to show you we do have one special piece of equipment that's not usually in operating rooms, and that's our warmer where the baby will go after delivery. And that's over here so that mom can hear the baby and the baby will be right here with her immediately after delivery. So we're going to go ahead and get started. We've already tested to make sure that Kristen's numb. And so we're going to go ahead and make a skin incision. Typically when we're doing a repeat cesarean section, we make the incision right through the patient's previous incision. This is called a fan in still skin incision. And it's a transverse or kind of bikini cut incision. And we basically just go down through the various levels. Sometimes we use the cautery to help with hemostasis so that there's minimal blood loss during this procedure. Patients who have had previous cesarean sections sometimes have a good bit of scar tissue. Sometimes there's really not a whole lot there. So we just have to see what we're going to find. We've already started, Kristen. Are you pretty comfortable?
00:05:32
KRISTEN: Yes.
00:05:33
LEAH D. RIDGWAY, MD: We've already started, so things are going well.
00:05:37
FEMALE VOICE: [Unintelligible.]
00:05:40
LEAH D. RIDGWAY, MD: Sure. The repeat cesarean section. Well, typically we try not to do elective deliveries before 39 weeks, which is a week before the patient's due date. And the reason why we try not to do that is we want to make sure that the baby's mature and lungs are ready for delivery. So anytime typically a repeat cesarean section is typically done anywhere from 39 weeks to the patient's due date. Right. Thank you.
00:06:17
REAGAN M. WITTEK, MD: Dr. Jackson, so 39-week babies tend to do as well as full-term babies do?
00:06:24
JODI JACKSON, MD: Anytime that you have a c-section delivery without labor, there's an increased risk for the baby to need some extra help. That's why it's really important to think about the reasons why a c-section is indicated. The literature suggests that once we get past 39 and one day compared to 40 weeks, there's probably not much difference in how the baby does. But babies born before that 39-week period can need a lot of extra help, and so we have to be often very careful with our dating when we're making these decisions.
00:07:00
REAGAN M. WITTEK, MD: Thank you.
00:07:01
LEAH D. RIDGWAY, MD: Okay. So right now we've gone through the first layer of the skin and the fat that's underneath and opened up the fascia. And now we're basically taking the fascia off of the underlying muscles to make plenty of room for the baby's head to come out. Again, using a combination of sharp dissection and cautery.
00:07:27
REAGAN M. WITTEK, MD: Another question has come through, Dr. Ridgway, and stop me if this isn't a good time. How many c-sections can one person have?
00:07:35

LEAH D. RIDGWAY, MD: You know, there's no hard and fast rule to that. Certainly with each successive c-section -- I'll take that, Kelly -- with each successive c-section, there's an increased risk of there being scar tissue, which may increase the patient's risk for complications or injury to surrounding organs such as bowel or bladder. But there's no hard and fast rule. Generally, we start to frown a little bit after the third or fourth.
00:08:01
REAGAN M. WITTEK, MD: Okay. And Dr. Wickstrom, this question looks good for you, coming from Prairie Village, Kansas. What is your opinion on this seemingly growing trend to undergo electric cesarean section instead of traditional vaginal delivery, especially for first-time expecting mothers?
00:08:17
ELIZABETH WICKSTROM, MD: Because c-section has become so common, we have a tendency to take it for granted and feel that this is not something that's potentially dangerous, and therefore, maybe we might prefer to be able to schedule the birth. Some women have a preference for a cesarean delivery because they feel it may cause damage to their bladder or their reproductive tract later on in life. Actually, data would indicate that those kinds of issues with bladder problems and reproductive tract prolapse can occur with age, with gaining weight, with having ever been pregnant, really regardless of the method of delivery. So that hasn't really borne out over time. So we as high-risk care providers are very adamant about going for a vaginal birth whenever it's physically appropriate for the baby to do so and for the mother to do so. So we don't encourage elective first-time moms having a cesarean birth.
00:09:12
LEAH D. RIDGWAY, MD: Okay. Well, I hate to interrupt, but we're getting down to the big event here. What we've done just now is we've dissected the bladder from the lower part of the uterus so that it'll be out of the way and that we're not likely to injure the bladder during this surgery. And we're getting ready to open the uterus and deliver the baby. And first, I'm going to get a little bit taller here so I have plenty of leverage and get up on the second standing stool. All right. We're really close, Kristen. Amniotic fluid is nice and clear. Lot of pressure, Kristen. That's good. I've got it. Good job. Thank you, Anna. Okay, and we're suctioning out the baby's mouth, and he's already trying to cry. Pretty cool. We're delivering the shoulders. All right. And it's a little girl. And she looks gorgeous. She is so pretty, Kristen. She is too sweet. Listen to her. She sounds great. I'm going to hold her up so you can see, babe. Say hi, mommy. Say hi to daddy. All right. And she's going to come right over here to the warmer. I'll take that. Here you guys go. All right. She's gorgeous. Congratulations, hon.
00:10:55
KRISTEN: Thank you.
00:11:00
LEAH D. RIDGWAY, MD: She is too cute. She's got the cutest little face.
00:11:05
KRISTEN: What color hair?
00:11:06
LEAH D. RIDGWAY, MD: You know, there's not a lot of it. I think it's kind of light, though.
00:11:10
JODI JACKSON, MD: What the nurses are doing with the baby now is just drying her off, because when babies come out they're wet, covered with their fluid and they can lose a lot of heat that way. So she's underneath the warmer and they're cleaning her off. And that fluid on her back, they're going to wipe that all off and get her stimulated to cry. Crying in the first few minutes of life is very helpful. It helps the lungs open up, helps her be able to take some deep breaths. And they're trying -- let's see if we can turn on the light so we can get a good picture of her to open her eyes. She's nice and pink all over, and that's from her nice crying that she's doing. And the nurse is looking at the umbilical cord to make sure that

the vessels are intact. And they're just going to clean her up and they're going to change her towels here in a minute so she can stay warm. And she's looking like she's feeling pretty good now. Maybe she'll open her eyes for us. When babies are first born, there's a transition that happens from the circulation in utero as a fetus to being the circulation of the baby. And that's what we're witnessing right now as you see her becoming pinker. Her circulation is changing and she's getting used to the oxygen in the air.
00:12:28
LEAH D. RIDGWAY, MD: So we're over here. Now we've got the patient's placenta delivered. And we've kind of cleaned out the interior of the uterus. And now we've exteriorized the uterus. So this is actually the patient's uterus. We see some of the big uterine veins here, round ligament. Her ovaries are back behind here. And basically what we're doing is sewing up the patient's uterus. So we'll use two layers of suture to sew up the uterus for strength and for hemostasis.
00:13:07
REAGAN M. WITTEK, MD: Dr. Ridgway, could you talk about the choice of a sideways incision on the uterus rather than an up-and-down incision on the uterus and what difference that makes?
00:13:17
LEAH D. RIDGWAY, MD: Sure. So this type of incision is called a transverse uterine incision. It's a stronger uterine incision typically made in the non-contractile portion of the uterus. And that's probably the most common type of uterine incision that we make. In special cases, for instance, with certain types of positions where the baby's transverse or very early deliveries where the patient hasn't labored, we'll actually perform what's called a classical cesarean section, and that's an up-and-down incision made in the middle of the uterus. It's thicker in that portion, so during the surgery that tends to bleed a little bit more. And also that heals a little more weakly, so in patients who have had classical cesarean sections, because the risk of uterine rupture with subsequent labor is greater, we generally don't consider those patients candidates for trials of vaginal delivery after cesarean section or VBACs. So we've completed the first layer of closure across the uterine incision, and things are looking good. Her uterus is firming up and there's minimal bleeding. And we're going to perform a second layer of closure, which is called imbrication, to pull another layer over this incision
00:14:46
REAGAN M. WITTEK, MD: Dr. Wickstrom, we have a question in here that addresses the difference between a spinal and an epidural and why you would use one over the other one.
00:14:56
ELIZABETH WICKSTROM, MD: Well, when the anesthesiologist and the patient talk things over, they basically make the choice of anesthetic together. The advantage of an epidural is that there's a little tube left in place through which medication can continue to be put through to continue the numbing or pain relief. It doesn't give you as dense a numbness or block as a spinal, so the combination of the two gives you a very dense block right at the time of the c-section. You can see that there's quite a bit of kind of tugging and pulling going on, and that can be more uncomfortable under just an epidural. But the advantage of the epidural is that over the next day, the patient is still getting ongoing medication to help her with pain relief. So that's the advantage of the combined approach.
00:15:38
REAGAN M. WITTEK, MD: Okay. Thank you. Dr. Jackson, this question is going to be for you. Is there an increased chance for babies to need the NIC-U with cesarean deliveries versus vaginal deliveries?
00:16:11
JODI JACKSON, MD: There is an increased chance a baby's going to need some special help after birth after a c-section delivery. Depending on the study you look at, it's between a 5 and 10 percent chance a baby's going to need anything from just a little bit of oxygen to a

lot of help in nursery. In any situation where the baby has to go to the nursery for special help, the baby can't be with the family as much, so it's something to consider always when performing a c-section without labor. And more importantly, if a baby is early, as we said earlier, before that 39th week, there's a much significant increased chance that the baby's going to need a lot of special help. So it's real important when c-sections are performed that we know the dates and that we try to do them as close to the delivery date as possible.
00:16:59
REAGAN M. WITTEK, MD: Great explanation. Thank you.
00:17:01
ELIZABETH WICKSTROM, MD: I think that also influences how people choose where they're going to deliver and what team is going to be available in the room for them. Not only do you have to have a really qualified surgeon, but you want to make sure that there is a team that's ready and waiting for the baby when the baby comes out, because there can be surprises in obstetrics. It doesn't always follow a prescribed path for us.
00:17:22
JODI JACKSON, MD: As you can see, we have our neonatal nurse practitioner attending to the baby. And we also have a neonatal nurse attending to the baby along the lines of what Dr. Wickstrom just described. Neonatal nurse as Shawnee Mission attends every single delivery, so they have the special care of a nurse that's trained in taking care of babies who need special help. The nurse practitioner has even a higher level of education and experience helping patients who need special help, and she's available at Shawnee Mission all day and all night long. There's also a neonatologist like myself available when we know there's going to be a baby who needs an extra amount of help. But as Dr. Wickstrom said, we're very careful to plan for every possible scenario.
00:18:07
LEAH D. RIDGWAY, MD: I'm going to interject one more time here. We've completed our two-layer closure of the uterus, and everything looks nice and dry. We're having, oh, maybe just a little touch right there that I'm going to control with the cautery. But we're having minimal bleeding. And so we're going to put the patient's uterus really back into her abdomen and then we'll kind of clear out any clots that are there and everything. So uterus is back in the abdomen. And then I'm going to hold this up for Dr. Martinez so she can see if there's any bleeding or clots there. And she's going to return the favor here on the other side for me, and we'll make sure everything looks dry and any blood clots that might have collected up there are cleaned out. And we'll check the incision again for hemostasis and make sure that we've got a completely dry operative field. And it looks really great. So we sort of checked the peritoneum and we don't see any bleeding on the peritoneal surfaces. This fatty drape that's right here is called the omentum, and that kind of acts as a protective layer for the patient. I don't typically close the peritoneum, so we're just going to kind of pull that together in the middle. It closes on its own in 24 hours. We'll check and make sure there's no bleeding with the rectus muscles. And if that's dry, we'll proceed to close the layer that's called the fascia, which is really the strength of the closure of the incision. And we're actually very close to being done with this cesarean section. So when things go as well as they've gone today, it's often a pretty short procedure.
00:19:46
REAGAN M. WITTEK, MD: We have a question from out of state directed to Dr. Jodi Jackson. What is the ointment placed in the eye of the baby after birth?
00:19:56
JODI JACKSON, MD: Babies are given erythromycin ointment in their eyes to protect against potential infection when they're delivered.. We culture and we look at the moms for infection, but we can never know for sure, so we want to avoid any possible infection to the eye that could affect vision later. So all babies get the ointment into the eyes after they're born. We also give a shot of vitamin K. That helps control bleeding. There's always a risk that babies who are born don't have adequate function of the liver, they're not mature

enough, and the vitamin K also makes a difference for that. So those are the two things we always do when babies are born. Parents can elect to have their hepatitis shot also given at birth or they can elect to do that at a later visit with the pediatrician.
00:20:56
LEAH D. RIDGWAY, MD: So the layer that we're closing here is called the fascia. And as I said, that's the strength of the incision. We'll close to the midline on one side and then Dr. Martinez will take over and close her side to the midline.
00:21:29
REAGAN M. WITTEK, MD: Dr. Ridgway, is it a good time for a question?
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LEAH D. RIDGWAY, MD: This is a terrific time for a question.
00:21:33
REAGAN M. WITTEK, MD: Okay. This question is coming from Angela about repeat cesarean sections, and if it poses such a risk, why is it preferred over BVACs?
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LEAH D. RIDGWAY, MD: Well, you know, I think that there are risks that go along with repeat cesarean sections, particularly if the patient's had a number of repeat cesarean sections. And there are also risks that go along with attempted BVAC. With a BVAC, there's a risk of uterine rupture. With multiple cesarean sections, there's a risk of scar tissue and injury to surrounding organs. So I think it's oftentimes something that we need to discuss with our patients, the particular risks of both, and both options need to be discussed. And then the patient and obstetrician together need to make a decision together about what's the most appropriate thing for the patient to choose.
00:22:30
ELIZABETH WICKSTROM, MD: I have to agree, Leah. I know that we have a very formal process in our office for patients with a prior cesarean birth who may be a candidate for a VBAC. Not everyone is. If you had a previous classical uterine incision or if you now have a placenta previa or some other reason that you must have a c-section, the subject doesn't really come up. But in women with a prior uterine incision that's compatible with a vaginal birth, we have a formalized process where we go through an information sheet that goes step by step through the pros and cons of a vaginal birth versus a repeat cesarean delivery. There's an issue called placenta accreta, which if you have multiple cesarean births, you're more likely to grow the placenta into the uterine wall. And so knowing that that's something that can occur may influence some moms and some physicians to move toward VBAC in a subsequent pregnancy. But it's very much a one-on-one decision in a case-by-case basis.
00:23:25
JODI K. JACKSON, MD: I'd like to make a comment about VBAC if I could myself. The VBAC, there is risk to a baby with VBAC. What Dr. Ridgway had said about a uterine rupture is an enormous risk to a baby and to the mother. So that's why all these risks and benefits need to be considered in every situation, the risk to the baby and to the mother. Although there is increased risk of a baby needing some special help with an elective c-section, the VBAC could pose a higher risk.
00:23:55
ELIZABETH WICKSTROM, MD: But I do want to add that although it's a very bad thing if it happens, the likelihood of it happening is actually very small.
00:24:01
JODI K. JACKSON, MD: That's right. Yes. That's why there's specific protocols and processes like you described to decide who's a good candidate for that procedure.
00:24:13
LEAH D. RIDGWAY, MD: So back over here with Kristen, we're currently closing the skin incision. And we close with staples. That leaves the patient actually with a very nice, fine scar in most cases. And after we close the fascia, we looked at the layer above the fascia and below the skin to make sure that there were no areas that were bleeding. And we

irrigated to hopefully decrease the risk of infection. And we're all done. That's the end of the c-section. Now, and Kristen's back there holding her baby and -- well, looking at her baby while someone else holds it for her and starting the bonding process. What we can expect for Kristen from this point forward is that she'll have a stay in the hospital that'll probably be three to four days. We'll ask her not to lift anything heavy for a full six weeks. We'll ask her not to drive a car for two weeks. We'll ask her not to do any abdominal exercises for a full six weeks. Typically when patients come into the office for their incision check at two weeks, they're not requiring any narcotics for pain control at that point. And then we have them come back at six weeks for their full post-partum checkup. And at that point, most patients are really pretty comfortable and really starting to feel physically pretty normal, other than the staying up all night with the baby and some of those other kinds of things that we all go through when we have a newborn in the house. So that concludes our c-section procedure. I'd like to thank everyone here and in particular thank Kristen for participating and sharing this with everyone. And I'm going to kick it back over to Dr. Reagan Wittek.
00:26:06
REAGAN M. WITTEK, MD: Thank you, Dr. Ridgway. We are about out of time. I would like to thank our audience for joining us in what I hope has been an educational and informative webcast. I would also like to extend a special thanks to our patient. Without her this program would not have been possible. Thanks. Here we go live, signing off from Shawnee Mission Medical Center in Merriam, Kansas. On behalf of my colleagues and the operating room staff at Shawnee Mission Medical Center, good night.
00:26:41
ANNOUNCER: This has been a cesarean section delivery performed live from Shawnee Mission Medical Center in Merriam, Kansas. OR-Live makes it easy for you to learn more. Just click on the "request information" button on your webcast screen and open the door to informed medical care.
00:27:05
[end of webcast]