Female Reproduction – Introduction

1. Read the following article: 

Miracle baby survives abdominal pregnancy

http://www.ctv.ca/CTVNews/Health/20050926/miracle_baby_050926/

Date: Tue. Sep. 27 2005 3:24 PM ET

Doctors in London, Ont., have witnessed a miracle after a woman gave birth following a rare extrauterine pregnancy. “We won’t see another case like this in my lifetime,” Dr. Victor Han, chairman of the division of neonatal-perinatal medicine at St. Joseph’s told the Medical Post. “A case like this won’t happen in the lifetime of my colleagues either. Probably not even in Canada. It is so rare.” So rare, in fact, there have only been four similar cases reported worldwide. Lia Tharby delivered her daughter, Emylea, at 33 weeks during emergency surgery to perform a vertical caesarean section. “My heart melts every morning that I see her,” Tharby told CTV News. “She is the most beautiful child I could ever dream of having.”

From the beginning of her pregnancy, Tharby was in and out of hospital with severe abdominal pain. But the doctors couldn’t determine what was causing it. Nor could they explain why the baby she was carrying was not encased in the normal sac of fluid. “It was difficult to figure out why there was no amniotic fluid around the baby despite the fact the baby had normal organ structure,” Dr. Renato Natale, associate chief of obstetrics at the London Health Sciences Centre, told CTV News. “We were at a loss.” What they didn’t know is that the fertilized egg had fallen into the abdominal cavity. And the placenta that feeds the baby had implanted on the outside of the uterus.

“They only found out when they opened me up and took her out. That’s the only time we knew for sure she was outside the womb. And it shocked me as much as it shocked them,” Tharby said. Emylea had dislocated hips and club feet and her skull was flattened due to the fact that she was squished beneath her mother’s liver and bowels during the pregnancy. While she will require surgery for her hip and bracing for her feet, Emylea is now an otherwise normal, healthy four-month-old.

“What went through our minds was: ‘wow, how can this happen?’” said Dr. Han. “It really has befuddled us all in terms of how effective that placenta was in terms of supporting the baby’s growth as well as it was implanted in an entirely hostile environment,” Dr. Natale explained. And that raises an intriguing question. If the placenta can grow outside the uterus, is it possible for men to carry babies as well? “If the appropriate conditions are created like hormones, any living person either woman or man could conceive,” Dr. Han told CTV News. The irony is that if Emylea’s predicament had been discovered early on, the pregnancy might have been terminated. The fact the misplaced fetus eluded detection means she is now a medical marvel.

2. List the scientific words found in this article. Then highlight the words you need to find out about – in order to fully understand why the doctors were so amazed by this pregnancy:

3. Now – let’s learn about the parts of the reproductive system:

<table>
<thead>
<tr>
<th>Part (describe – what it looks like, where it is found)</th>
<th>Function – what does it do</th>
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<tbody>
<tr>
<td>Ovaries – female gonads that lie in shallow depressions on each side of the upper pelvic cavity.</td>
<td>Produce oocyte (the egg) and sex hormones.</td>
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<td>Follicles – In the cortex of the ovary.</td>
<td>Each contains an immature oocyte. There are 700 000 follicles at birth however, only 400 mature.</td>
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<tr>
<td>Corpus luteum – if it made after the follicle ruptures and the oocyte is release. The corpus luteum eventually disintegrates. Gland like structure.</td>
<td>Produces the sex hormones progesterone and some estrogen.</td>
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<tr>
<td>Oviducts (fallopian tubes)</td>
<td>Conduct oocyte; location of fertilization; transport early zygote (fertilized egg)</td>
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<tr>
<td>Uterus – thick-walled, muscular organ about the size and shape of an inverted pair</td>
<td>Houses developing fetus</td>
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<tr>
<td>Endometrium – lining of the uterus</td>
<td>Participates in the formation of the placenta – supplies nutrients for fetal development. Varies in level of thickness according to the monthly cycle</td>
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<tr>
<td>Cervix – narrow end of the uterus, leads to the vagina.</td>
<td>Contains opening to uterus</td>
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<tr>
<td>Vagina – the tube that lies at a 45 degree angle to the small of the back.</td>
<td>Receives penis during sexual intercourse; serves as birth canal and as the exit for menstrual flow.</td>
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<tr>
<td>Clitoris –part of the vulva (external genitals) by the vagina opening</td>
<td>Gland of sexual arousal and like he penis, contains erectile tissue that becomes engorged with blood during sexual stimulation</td>
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The Female Reproductive System: Identifying Structures and Functions

1. Complete the diagram by labeling the organs of the female reproductive system:

Female Reproductive System

- Uterine/fallopian tube
- Oviduct
- Ovary
- Uterus
- Cervix
- Bladder
- Vagina

2. Identify the organs of the female reproductive system that perform each of the following functions:
   a. Produces estrogen:  
      - Follicle-Stimulating hormone → follicle
      - Anterior pituitary
      - (FSH)
   b. Prepare an ovum for ovulation:  
      - Ovary
   c. Prepares itself to nourish and protect a fertilized egg:  
      - Endometrium
   d. Passageway through which the egg travels on its trip to the uterus:  
      - Oviduct

The Menstrual Cycle: Interpreting Diagrams

1. Use the terms listed below to correctly complete the diagram. Then use the correctly labeled diagram to answer the questions that follow.

- Ovulation
- Menstruation
- Luteal phase
- Follicular phase

2. What happens to the levels of FSH, LH, and estrogen in the blood during ovulation?
   - Increase
   - Feedback controls amount in blood
   - Progesterone (corpus luteum) passes out of the vagina

3. What hormone level increases following ovulation?
   - Progesterone (corpus luteum)

4. During menstruation, what happens to the uterine lining?
   - The vagina

5. In terms of the follicle, when does ovulation occur?
   - After the mature follicle bursts