Visual Exam of the Belly

Not Innies, Outies, or Piercings:
Visual Examination of the Belly as a Gateway to Intra-Abdominal Diagnosis
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"Neither procreative nor nutritive, perhaps it is the navel's lack of obvious purpose, combined with its audacious, almost arrogant, spot right there in the middle of things, that sucks its admirers in."
~ Deirdre Day-MacLeod

1. Terms of affection for the central indentation
   a. Omphalos (Greek)
   b. Umbilicus (Roman)
   c. Navel (Center; 'Nabe' or hub of a wheel, German)
   d. Belly Button (1877 American)

2. Navel in world theology
   a. Turkey: On seeing the first man created by Allah, the Devil spat at his stomach. Allah then made a grab at and removed the polluted spot, the resultant scar thus explaining why humans have a belly button.
   b. Byzantine mystics for their part thought of their navels as 'circles of the sun', expecting to observe a refraction of the light streaming from sacred Mount Tabor.
   c. Omphalos at Delphi
      i. Greek mythology: Zeus, seeking to discover the precise centre of the earth, arranged for two eagles to fly at the same speed, one from the east and the other from the west. They met at Delphi, and so it was there, in a temple to Apollo, that the Greeks set up an omphalos — that is, a holy navel-stone — guarded by two golden eagles. Apollo, explained Plato, ‘has his shrine at the world's centre and navel, to guide mankind.’
   d. Hindu: The lotus flower is said to be the center of the universe. There is a story that it arose from the navel of God Vishnu, and at the center of the flower sat Brahma. In Hindu thinking, the navel is the ‘motionless hub of the wheel’; it may alternatively be viewed as the tree under which the Buddha sat when he achieved illumination at Bodhgaya.
   e. Song of Solomon, King James Bible
      i. "Thy navel is like a round goblet, which wanteth not liquor: thy belly is like an heap of wheat set about with lilies."
   f. Gazing at your Navel: Omphaloscopy
      i. Omphilopsychic: a mystics who gazed at their own navel so as to induce a hypnotic reverie. The Greek Christian monks of Mount Athos used a specific method of navel contemplation called Hesychasm.
      ii. Omphalomantry: Predicted how many children a woman would give birth to, by counting the number of knots (bumps in the fleshy plaiting) in her umbilical cord when she was born.
3. Location
   a. Leonardo’s Vitruvian Man
      i. *The navel is naturally placed in the centre of the human body, and, if in a man*
         *lying with his face upward, and his hands and feet extended, from his navel as*
         *the centre, a circle be described, it will touch his fingers and toes.*
      ii. Golden Section, AKA "Divine Proportion" by philosophers and artists. This is a
         geometric proportion in which a line is divided so that the ratio of the length of
         the longer line segment to the length of the entire line is equal to the ratio of the
         length of the shorter line segment to the length of the longer line segment. This
         Golden Section ratio has a numerical value of approximately 1.618. In other
         words, an ideal navel height is about 62% of the body height and is said to
         exhibit special beauty as the legs and torso appear in sound proportion.
   b. Navel Location for Medicos
      i. At the level of the L3-L4 vertebrae
      ii. Skin enervation by the T10 dermatome
      iii. The level of a 20 week pregnancy (half way point)

4. Embryology of the umbilicus
   a. Umbilical Cord Anatomy
      i. Forms by 5th week of fetal development, replacing yolk sac for nutrients
      ii. Wharton’s Jelly, one vein (oxygenated blood from mom), 2 arteries
          (deoxygenated blood to mom)
      iii. The deoxygenated blood from the fetus passes very close to the mother’s blood
          in the placenta, where oxygen and nutrients pass from mother’s blood to the
          fetus’ blood, and waste does the reverse.
      iv. Shortly after birth, upon exposure to temperature change, the gelatinous
          Wharton’s Jelly substance creates a natural clamp on the umbilical cord which
          halts placental blood return to the neonate, causing the cord to cease pulsation.
          This process will take as little as five minutes if left to proceed naturally.
   1. Lotus Birth: Some parents choose to omit cord severance entirely, a
      practice called "lotus birth" or umbilical nonseverance. The entire
      intact umbilical cord is allowed to dry like a sinew, which then
      separates naturally (typically on the 3rd postpartum), falling off and
      leaving a healed umbilicus.
   2. Cord Blood Banking Controversy
      a. Cord blood is a rich and readily available source of primitive,
         undifferentiated stem cells (i.e. CD34-positive and CD38-
         negative). Some parents have chosen to have this blood
         diverted from the baby’s umbilical blood transfer through early
         cord clamping and cutting, to freeze for long-term (and costly)
         storage at a cord blood bank should the child ever require the
         cord blood stem cells.
      b. Critics feel that early cord blood withdrawal at the critical
         time of birth actually increases the likelihood of childhood
         disease, due to the high volume of blood taken (an average of
         108ml) in relation to the neonate’s total supply (typically
         300ml).
      c. The Royal College of Obstetricians and Gynaecologists 2006
         opinion states, “There is still insufficient evidence to
         recommend directed commercial cord blood collection and
         stem-cell storage in low-risk families.”
5. Navel appearance
   a. “Outies”: Unknown scientific medical terminology, represents 10% of all belly buttons
      i. Transient outies during some pregnancies, usually resolves spontaneously
      ii. Unclear etiology
         1. Plastic surgery (umbilicoplasty) is available at cost of $500-$2000
         2. Outie is not Umbilical Hernia
   b. Umbilical hernia: A belly button that protrudes with abdominal muscle contraction, such as when coughing, sitting up, or straining
      i. Occur in 5-10% of all babies.
      ii. Most close on their own by age 1; up to 10 percent may take longer to heal.
         1. Umbilical hernias that don’t disappear by age 4 or those that appear during adulthood require surgical repair.
   c. Umbilical piercing: think twice
      i. Endocarditis, adhesion reports
      ii. Do not pierce umbilical hernia; “outie” piercing appears safe
      iii. Temporary removal of metal/foreign body for surgical or radiographic intervention
         1. Disinfect the piercing and umbilical area with 70% isopropyl alcohol
         2. Open the piercing jewelry by removing the bead from the bar
         3. Place the tip of a tight-fitting intravenous catheter (14 or 16 gauge, without the needle) over the threaded tip of the bar
         4. Advance the intravenous catheter caudally, pushing the piercing out of the skin tract
         5. Remove the jewelry and leave the intravenous catheter in the subcutaneous skin tract as a spacer.
         6. After the intervention, reinsert the piercing jewelry by following the described steps in reverse order.
   d. Medical conditions
      i. Sister Mary Joseph Nodule
         1. Today’s SMJ Nodule
            a. Umbilical piercing leading to presentation of ovarian cancer
      ii. Cullen’s Sign
      iii. Grey-Turners Sign
      iv. Umbilical Varices
      v. Umbilical Fistula
      vi. Others
   6. Various social aspects of the umbilicus
      a. US broadcasting and censorship
      b. Stigmata of malposition or lack
      c. Lint acquisition

Resources:
Muensterer OJ. Temporary removal of navel piercing jewelry for surgery and imaging studies. PEDIATRICS Vol. 114 (3) September 2004, pp. e384-e386
Sanghera P, El-Modir A. Umbilical piercing leading to presentation of ovarian cancer. The Lancet Oncology, Volume 6, Issue 9, Pages 730 – 730
Note: Much of the social aspect information in this presentation came from multiple open sources on the internet.