Placentophagy Practices: Impact on Perinatal Health & Lactation
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Objectives

Evaluate the current evidence regarding potential benefits and risks of placentophagy on perinatal and lactation outcomes.

Identify key considerations for counseling patients who inquire about or practice placentophagy.

Apply an integrative, culturally competent approach to discussing postpartum placenta medicine practices with families.

PHYSIOLOGICAL FUNCTION AND FACTS

Temporary organ - functions as fetus's lungs, kidneys, and digestive system

Interdependent fetoplacental unit –Mother, fetus, placenta

Regulates fetal metabolism, hormones, excretion, respiration, immune function

Functional barrier, regulating passage of substances

Weight: 450 g

Calories:234 calories, 4 g fat, 899 mg cholesterol, 513 g sodium, 48 g protein

Trace elements: iron, selenium, calcium, copper, magnesium, phosphorus, potassium, zinc

Amino acids: alanine, aspartic acid, arginine, histidine, leucine, lysine, phenylalanine, proline,

tyrosine, tryptophan, and valine

Vitamins B 1 , B 2 , B 5 , B 6 , B 7 , B 9 , B 12

Cytokines , growth factors (e.g. G-CSF, GM-CSF)

Hormones: oxytocin, human placental lactogen, progesterone, estrogens, thyroid-stimulating

hormone (TSH), adrenocorticotropic hormone (ACTH) , corticotropin-releasing hormone (CRH)

Microbiome/microorganisms: Firmicutes, Tenericutes, Proteobacteria, Bacteroidetes, Fusobacteria phyla, etc

Placental Traditions

179 global societies traditions reviewed, Historic/traditional placenta consumption very rare, only a few isolated cases noted

Global traditions, various beliefs

◦ Symbolic ritual, burial, burning, land ties, amulet/vessels, etc

◦ Fate, protection, fertility, connection

(Botelle, 2020; Kristal, 1980; Moeti, 2023; Young & Benyshek, 2010)

Placentophagy Timeline

Uncommon postpartum practice globally, Promotion by natural birth proponents from 1970s (Botelle, 2020; Menges, 2007)

◦ "Mammals do it, so it must be healthy"

Most likely: US based home/community birthing parents, 24-30%

Awareness and Demand

Who knows about placentophagy? 89% perinatal providers, 66% patients, 3% had consumed (Cremers, 2014: Schuette, 2017)

Although placentophagy is absent in the cross-cultural ethnographic record . . . demand for services…increase in the numbers of people becoming trained in providing services may indicate increasing popularity of the practice. (Selander et al., 2013)

Birth, attitudes and placentophagy: A thematic discourse analysis of discussions on UK parenting forums

(Botelle & Willott, 2020)

Parenting forums: 1752 posts , 956 users , 85 threads

3 main themes identified

◦ Women recounted predominantly positive attitudes towards own placentophagy

◦ They were respectful of others' views /experiences

◦ Some had negative views, particularly around the concept of disgust

Parenting forums findings:

Discussion of risks were rare

Allow for discourse for/against

Community connection over values (personal experience vs medical evidence, bodily autonomy). "This paper argues that placentophagy is practiced as a resistance to medicalization as an assertion of control by the mother, whilst simultaneously being a medicalized phenomenon itself".

Primary Cited Reasons (Benyshek, 2018; Selander, 2013; Stanley, 2019)

Prevention of perinatal depression, anxiety, Iron, nutrient support, Birth recovery support, General health benefits, Recommendation from a midwife/provider, Optimize lactation, Stop bleeding (acute use)

Modes of Placenta Preparation (Benyshek, 2018; Farr, 2018; Selander, 2013)

Encapsulation: 80% choose this form. Other forms: tincture, raw or cooked (smoothies, dishes, etc)

Sample: Placental Preparation

Processed within few hours post delivery

Cleaned: cold running water, fetal membranes, cord, blood clots, etc removed

Cut into slices + dehydrated, avg 8hr @ 130F degrees

Slices powdered (mixer, food processor)

Powder put into capsules (avg 500mg)

Common dose 2 caps, 2-3 x/day, or 3000 mg/day

Animal Placentophagy (Kristal, DiPirro, & Thompson, 2012)

Most (4,000+) mammals ingest some or a portion of the afterbirth (the amniotic fluid, the placenta, and/or associated membranes). Exceptions: Camelids (domestication?), Cetacea (marine mammals)

Mammalian placentophagy theories: To hide afterbirth/scent of birth from predators, Keeping the nest clean, Nutrition, hunger, Acquiring specific hormones. Researchers found SOME truth to these reasons but speculate there must be other reasons…(Kristal, 2012; Noonan, 1979)

POEF: Pain Relief & Bonding

Consumption of amniotic fluid + placenta = enhanced morphine-mediated pain relief + initiation of maternal caretaking behavior "By ingesting a small amount of amniotic fluid, the mother could receive opioid-enhancing benefits before the first fetus was born and that pain relief could be continued after delivery with ingestion of the placenta".

Caretaking behavior of licking/cleaning offspring may be behavioral + chemically supportive for bonding (Kristal, 1986,1988, 2009)

POEF: Placental Opioid-Enhancing Factor

Placental villi synthesize opioid peptides, changes CNS endogenous opioid activity

POEF not analgesic itself, improves opioid-mediated antinociception in peripartum

Provide analgesic effects to any mammal that consumes another mammal's amniotic fluid and

placental tissue orally. Not species/ sex-specific. Counteract pain of delivery without increasing other hormones/chemicals that may compromise mother's health or ability to care for young (Abbott, 1991; Kristal, 1986, 2012; Mota-Rojas, 2020; Thompson, 1991)

Mammalian Practices: Multifaceted & Complex

More than just replacing nutrients, staving off predators

Combo of licking/consuming raw amniotic fluid + placental fragments = optimized pain relief,

caretaking effects. Beneficial properties in afterbirth materials inactivated at room temperature for 24+hr or heated above 95 °F. More not better: larger amounts ingested were less effective, inhibitory. Impact on prolactin, progesterone noted (Blank, 1980; Kristal 1985, 1988, 2012)

Birth Evolution + Human Survival Theory Kristal et al. hypothesis:

Humans have evolved into social beings who must rely on others to survive

With no POEF, during/after delivery, humans would be more reliant on others for maternal/infant

survival, furthering evolutionary socialization. Possible early cultural transmission that raw placenta/amniotic fluid became harmful/toxic to ingest. Even though most mammals consume afterbirth materials, evolution may have made it not in the best interest of humans to do so (Kristal, 2012; Young , 2010)

Traditional Chinese Medicine (TCM)

Internet sources + some articles claim TCM uses placenta postpartum

TCM experts argue: ◦ Modern interpretation of TCM texts may not be accurate, ◦ Historically NOT recommended for postpartum ◦ Could be toxic, needs careful prep and prescription

Zi He Che: Non-postpartum preparations vary by province

Nourishes blood, Qi, Jing: Impotence, infertility, tuberculosis, debility, weakness, lung/kidney deficiency, etc

Strict regulation, safety concerns

Human placenta replaced with placenta from pigs, goats, cattle (also hard to get due to regulations)

Modern case reports of side effects (injected preparations): nausea, vomiting, headache, diarrhea,

anaphylactic shock (rare) (Bensky, 2004)

TCM Thoughts: Sabine Wilms, PhDhttps://www.happygoatproductions.com

Placenta was never a standard postpartum practice. Never mentioned in the classic Materia Medica

Later references list placenta as a powerful substance, not to be used lightly, points to dangers of giving the wrong treatment to women in a vulnerable stage of postpartum recovery. Consuming one's OWN placenta was not a part of TCM

Hominis Placenta Extract (HPE): Korean Medicine (Jahageo Yakchim)

HPE extract, injection=, approved by Korean FDA, Tx of chronic liver diseases.

Process: Placentas = full term, healthy, screened. Refrigerated, processed. Extract: Water extraction,

chemical hydrolysis, sterilized, sealed for sale.

Animal models: Anti-inflammatory effects on arthritis, reduced sciatic pain, improved neuron growth/peripheral nerve fiber regeneration (Seo, 2006; Yeom, 2003)

Kong, 2012: Elderly health status study (metabolic, cardiac, etc) 65+, RCT: HPE = 22, placebo = 17, weekly injections. HPE group significant score improvement (physical function, general + sexual health)

Lactation Evidence

Proponents claim placenta consumption can increase milk supply

Existing 'placenta as a galactogogue' research and methodology is nearly 100 years old

Effect of ingestion of desiccated placenta during first 11 days of lactation (McNeile, 1918)

Study conducted for 11 days in Los Angeles hospital

8 patients= desiccated placenta

8 patients =control group

Breastmilk + infant weights studied

Findings:

Placenta group milk= increase in lactose, protein, decrease in fat

Milk deficiency: None in placenta group, some in control group

Infant weight: Placenta group = initial weight loss but end of 11 days = 4oz heavier than control group

The effect of the maternal ingestion of desiccated placenta upon the rate of growth of the breast-fed infant (Hammett, 1918)

1. Growth curve data collected: 537 exclusively breastfed infants -mothers (no placenta consumption) (Boston Lying-In Hospital, now Brigham and Women's Hospital)

2. Collected weights: 177 infants (mothers given 10 g of desiccated placenta caps, 3x/day, 2 weeks)

3. Weights in placenta group were higher than non-placenta group

4. Placenta group: no significant change in milk volume/breast tissue growth

5. Conclusion: "there must be contained in the desiccated placenta, some substance . . . capable of passing through the maternal organism . . . passed on to the infant in the milk, acting as stimuli to growth"

Placenta as a lactagogon (Soykova-Pachnerova et al., 1954)

Two groups, all participants chosen because "trouble in nursing was anticipated"

◦ Lactofer I (placenta group), Lactofer II (beef protein group)

No controls, variety of timing, issues (immediate post birth – 2 mos, glandular, Hx low supply, etc)

Group I (placenta) = 210 women, 86% positive results ◦ 71 = very good results (30g milk/feed, flows easily)

◦ 110 = good (20g milk/feed)◦ 29 = negative results. Group II (beef): 27 mothers included, 33% positive results

The authors concluded the results seemed unlikely due to 'biogenic stimulators', protein or progesterone but perhaps other unknown hormones

Phenomenological Placenta Data Selander et al., 2013

◦ 189 placentophagic women, ◦ 18 yr+, most US/Canada, ◦ 92% positive experience, ◦ 98% would repeat

◦Themes from my practice (2014): ◦ Mood support, ◦ "won't hurt, why not?", ◦ Friends/provider recommended, ◦ Some = increased anxiety, milk supply concerns

Placentophagy Impact on Nutritional Status (Gryder, 2017; Johnson, 2018; Young, 2016)

Encapsulated placenta (EP) analysis (9-28 + placenta)

Analysis revealed: arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, molybdenum,

rubidium, selenium, strontium, uranium, zinc

3300 mg provides % recommended daily allowance (RDA):

24% RDA iron, 7.1% RDA selenium, 1.5% RDA zinc, 1.4% RDA copper

Not enough iron to boost levels in anemic parents

Encapsulated Placenta: Hormone Content (Farr, 2018; Johnson, 2018; Phuapradit, 2000; Young, 2016, 2018)

17 + hormones found in all preparation types, Steam/dehydration reduced some concentrations

Progesterone, estradiol, testosterone oxytocin, estrogens, progesterone, human placental lactogen,

ACTH, CRH. Overall hormone levels relatively low, some estrogens and progestogens may reach physiological

effect thresholds. Hormone protein structure impacts oral bioavailability. Hormone variability by person noted (endocrine variations, stress, etc)

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Placenta for Postpartum Depression: Aid or Trigger?

Main cited reason for use: Mood support, prevention of PMAD

Sharp progesterone drop post delivery CAN make PMAD worse

Rx treatment Brexanolone (Zulresso) – synthetic form allopregnolone

◦ One paper conceptualized 2.5 days oral progesterone 100 mg q2h (1.2g) as comparable to IV brexanolone for serum levels to reach levels before delivery (Barack, 2020)

3 g (daily dose) placenta contains 56.3 mcg progesterone

Some amount of trace progesterone in EP may help some, may not help others

Comparison of placenta consumers' and non-consumers' postpartum depression screening results using EPDS in US community birth settings Benyshek, Bovbjerg, Cheyney, 2023

Edinburgh Postnatal Depression Scale (EPDS) scores of placenta consumers, non-consumers of n=1876 each placentophagic, non-placentophagic

Matched groups created based on scored analysis (90+ variables: demographics, birth/Pg Hx, mental health, complications, etc)

EPDS ≥ 11: Placentophagic: 9.9%, non-placentophagic 8.4%

Results: After controlling for over 90 variables, placentophagy associated with 15-20% increased risk of PPD. Numerous sensitivity analyses did not alter general finding.

Conclusions: Despite careful matching, placentophagic individuals scored higher on EPDS compared to non-placentophagic controls.

Reverse causality may play a role. Placenta didn't cause increased PPD, those that engage in placentophagy may be at greater risk of PPD

Toxic Concerns: (Gryder, 2017; Johnson, 2018; Young, 2016)

Heavy Metals and Microorganisms

Present in placental preparations:

◦ Arsenic, cadmium, lead, mercury, uranium

◦ Below established EU toxicity thresholds

Microorganisms:

◦ Placental tissue not sterile

◦ Own microbiome (non-pathogenic symbiotic microbiota: Firmicutes, Tenericutes, Proteobacteria,

Bacteroidetes, Fusobacteria phyla, etc)

◦ n=9 : Mainly vaginal flora detected w/ placental swabs (raw, steamed, dehydrated)

◦ Microorganisms MOSTLY undetected after dehydration (130F)

◦ Case report GBS transmission

Late-Onset Infant Group B Streptococcus Infection Associated with Maternal Consumption of Capsules Containing Dehydrated Placenta Buser et al., 2017

Sept 2016, Oregon, Neonatal late-onset group B streptococci (GBS) requiring hospitalization

M = GBS negative at 37 wk

After birth, infant ill/GBS+. Admitted, Tx w/ Abx, then D/C

5 days after d/c, baby ill + readmitted. GBS+ (again), Abx Tx started

M had placenta encapsulated after delivery, started consuming from 3 d PP

Capsules cultured GBS+ (same GBS strain as from infant's blood infections), M's breastmilk was GBS -

Transmission thought to be from high maternal colonization secondary to handling/consumption of GBS infected placental tissue , and then close contact between mother and child (handling caps/container/baby, etc)

Placentophagy: Impact on Lactation

Check your bias! Benefits vs risk counseling. "Natural ≠ Safe"

Individual response varies

Caution: Supply concerns, Hx sensitive to hormone fluctuations

Parent consuming w/ no supply concerns? Ask if they'd like more info

Empower families to make individualized, informed choices

Be a Brainiac

Mindful care = using our BRAIN

B = Benefits

R = Risks

A = Alternatives

I = Intuition

N = Nothing, Next steps

NOTES:

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