Eating Disorders in perinatal period
Masterclass refresh

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Summary:

- Overview and Facts
- Types and severity of EDs
- **Eating disorder in pregnancy: cases** *
- Consequences of EDs: physical and mental
- Co-morbidities
- ED in perinatal period
- When should we be worried?
- Risks
- **What is it like to be a woman with an ED?** *
- Complications of ED in perinatal period
- **Maternity challenges** *
- When to refer to EDS – Screening and investigations
- Recommendations for treatment of ED in perinatal period
- Perinatal service role in monitoring of perinatal EDs
- Capacity assessment in EDs
- Learning points
Overview of ED

• Clear female predominance, with 25% in males
• **During lockdown** – 73% increase of pt seeking help (all EDs) (living situation/family, isolation, routine, coping strategy, exercise, food availability, EDs)
• AN has the highest mortality of any psychiatric disorder: ~10-20%; 50% mortality in AN is due to suicide
• Risk of death for AN 3X higher than that of depression, schizophrenia or alcohol related illness
• Less 50% fully recover - mostly if effective R/ in 1st 3 yrs after onset
• Average course: AN 8yrs & BN 5yrs
• 1/3 have relapsing remitting course and 20% become chronic
• High costs to person, family and society
• High ambivalence about treatment
• Early identification, assessment and treatment is crucial

Papadopoulos et al., 2009; Guillaume et al., 2011; Kostro at al, 2014; Beat, 2020
Overview ED in perinatal period

- Affects 7% of women in perinatal period
  - With active or past ED
  - Relapses: antenatal and postnatal
  - Frequently associated with anxiety and depression

- Prevalence and incidence:
  - South London study of 545 women: 2% (95% CI 0.4-3) met criteria for an ED
  - Norwegian MoBa Study:
    - Remission: 78% (EDNOS-P), 40% (BN purging), 29% (BN non-purging), 39% (BED); increase incidence of BED
  - ALSPAC study (n=739) found 7.5% meet criteria for ED VS 9.2% pre-pregnancy
  - Prevalence: AN 0.5%, BN 0.1%, BED 1.8%
  - 1/4(23.4%) of women reported high weight and shape concern during pregnancy
  - binge eating was allowed by 8.8%
  - 2.3% engaged in regular compensatory behaviours

- Non perinatal - Prevalence (UK): AN 10%, BN 40% and EDNOS/BED 50%
- Lifetime prevalence (USA): Women: AN, BN & BED: 0.9%, 1.5%, and 3.5%,
  Howard at al, 2018; Bulik at al, 2007; Easter at al, 2013; BEAT, 2019; Kessley et all, 2013; Solmi at al, 2014
Facts on EDs

• Aetiology is multifactorial; High heritability; 58–88%

• Mortality:
  - Ratio: 5.86 for AN, 1.93 for BN, and 1.92 for EDNOS
  - One in five AN committed suicide, BN also high risk of suicide
    → in Purging subtype of EDs (20-30% vs 7.4%) & previous trauma

• Costs: 0.8 billion Euro/per annum (0.6 billion pound per annum)
  - UK is estimated to be around £80–100 million per year (NHS + private care)

• Contributing factors:
  - significant life events, exposure to stress
  - exposure to increase anxiety and depression in pregnancy and to obstetric complications, eg. prematurity and small for gestational age
  - Anxiety in covid-19 pandemic, change routines, coping mechanism

• Maintaining Factors:
  - OC traits, rigidity and excess attention to detail
  - high sensitivity to judgment, low self-esteem, and high striving

Klump et al., 2009; Lucas, 1992, Bulik et al., 2000; Gorwood at al, 2002; Micali at al, 2012; BEAT, 2019; Kessley et all, 2013; McBride et al., 2007; Arcelus J, 2010; Hudson et al., 2007; Solmi at al, 2014, Branley-Bell, D. et al, 2020
Eating Disorders in perinatal period

https://youtu.be/Pza62vBFDqk
Eating disorders are psychiatric illness where there are abnormal eating habits, that may involve either insufficient or excessive food intake. Affect both women (majority) and men.

- **Anorexia Nervosa (AN)**
  - Restrictive type
  - Purging type
- **Bulimia Nervosa (BN)**
  - Purging type
  - Non-Purging type
- **Binge Eating Disorder (BED)**
- **Avoidant-restrictive food intake disorder (ARFID)**
- **EDNOS (Eating Disorders Non Otherwise Specified)**
  - Other Specified Feeding or Eating Disorder (DSM 5)
  - Other feeding or eating disorder (ICD-11)
Avoidant-restrictive food intake disorder (ARFID)

- abnormal eating or feeding behaviours - result in insufficient quantity or variety of food intake – to meet demand/nutrition
- causing significant
  - weight loss,
  - failure to gain weight as expected in childhood or pregnancy
  - clinically significant nutritional deficiencies
  - dependence on oral nutritional supplements or tube feeding
  - negative effect in the health or significant functional impairment
- not due to:
  - concerns about body weight or shape
  - Lack of food availability
  - effect of medication or substance
  - other health problems
Severity of EDs

Anorexia Nervosa (AN)

- Mild: BMI more than 17-18
- Moderate: BMI 16 - 16.99
- Severe: BMI 14-15.99
- V severe: BMI less than 14

Binge Eating Disorder (BED)

- Mild: 1-3 binge eating episodes per week
- Moderate: 4-7 binge eating episodes per week
- Severe: 8-13 binge eating episodes per week
- V severe: 14 or more binge eating episodes per week

Bulimia Nervosa (BN)

- Mild: average 1-3 episodes of inappropriate compensatory behaviours per week.
- Moderate: ~ 4-7 episodes of inappropriate compensatory behaviours per week.
- Severe: ~ 8-13 episodes of inappropriate compensatory behaviours per week.
- V severe: ~ 14 or more episodes of inappropriate compensatory behaviours per week.
Anorexia Nervosa (AN)

- BMI < 18
- Body image distortion – shape concerns
- Morbid dread of being fat – weight concerns
- Compensatory mechanisms eg: restricting food intake, excess exercise, purging, ...
- Physical Symptoms of starvation eg: amenorrhea, ↑cold, tiredness, ankle swelling, osteopenia/osteoporosis, ...
- Psychological Sx: eg: anxiety, depression, isolation, avoidance, obsessive thoughts, ruminations & feeling stuck, preoccupations with food, guilt, ...

*Amenorrhea removed from criteria (DSM V/ICD11)*
Bulimia Nervosa (BN)

- Preoccupation & craving for food
- Binging, with sense of loss of control
- Use of compensatory mechanisms eg Vomiting, abuse of laxatives, diuretics, excess exercise
- at least once a week
- Fear of becoming fat

- **Physical Symptoms:** oligomenorrhea or irregular menstruation, teeth erosion and decay, cuts in hands, hematemesis, ....

- **Psychological symptoms:** anxiety, low mood/depression, ↑risk of binging in future, substance misuse, PTSD, emotional instability
Binge Eating Disorder (BED)

- Recurring episodes of eating significant amount of food in a short period of time
- marked by feelings of lack of control
- feelings of guilt, embarrassment, or disgust
- at least once a week over three months
- **Sx:** Overweight or obese, metabolic complication of it; POS, depression, anxiety, isolation, ...
Case 1 — what is likely Diagnosis and risks

- Ms A, 20yrs old girl, weight 42Kg (6.6St), height 166cm (5.4ft), BMI15.2
- Distressed as feeling like a “whale” and intense fear to become fat
- Drinking 1 glass water and eating only 1 apple, 1 yogurt and 2 carrots a day
  - Started restricting food in adolescence, after comments that she was “chubby” or compliments after losing some weight (eg. after flu)
- Once a week, orders a pizza, eats half and after self induces vomiting (SIV)
- Exercising daily for 2 to 3 hours, although struggling recently as feeling tired and dizzy all the time
- Feeling anxious - constantly thinking about food and counting calories
- Banging head against wall at least once a day (to deal with distress and get “ride of AN voice in her head telling her to not eat and be strong”, “in control”)
- Isolating herself and not sure if can “go on”
- PH: Perfectionist, high achiever, good grades in the past
  Always cooked for family but won’t eat with them, “eating” in her room later
- Family Hx: controlling mother, absent father, younger siblings, weight/ED problems in family.
  - Just got married and feeling pressure to become pregnant, but been unable so far (1yr)
Case 2 – what are diagnosis and risks

- Ms L, 44yrs old lady, weight 110Kg (17.3St), Height 175cm (5.7Ft), BMI 36
- 26 weeks gestation, just diagnosed with GDM, sugars continue poorly controlled despite medication prescribed that she says she is taking.
- Feeling worried about her baby, but feels she is doing all she can to control GDM
- However eventually admits about 1 -2 x a week, gets home and can’t control herself and eats in about 1 hour: 2 pizzas, 2 tubes ice-cream, 3 big bags of crisps and 4 packs of biscuits that she bought on the way home
  - Eats after the rest of family is asleep, husband and 2 year old son
  - Feels very guilty, specially about her baby and ashamed afterwards
  - Promises herself it is the last time, but has been unable to keep the promise
  - Frequently does it after stressful day at work or if ate anything earlier that she feels he “shouldn’t have”
- Medical Hx: high BP and cholesterol, plus mobility problems
- Unable to exercise due to knee pain
- In the past – frequently low mood due to weight and at times feelings that there is nothing for her in life, “if I died would be blessing”, occasionally planned to end her life by jumping in front of a train.
Case 3 — what are diagnosis and risks?

• Ms B, 36yrs old, weight 52Kg (8.1St), height 166cm (5.4ft), BMI19.7
• Distressed as she is 14 weeks gestation, planned pregnancy.
• Feeling ambivalente about pregnancy as already put on 5Kg (11 pounds).
• Said ‘I cannot cope with increase 1 more gram, I think of nothing but food all day and I feel so hungry’.
  • Drinking nothing all day and then drinking 5 smoothies at night and eating 2 tubes ice-cream 500ml and cakes and chocolate, daily.
  • Said that after she feels very sick and vomits in half the times.
• Feeling too tired to exercise and previously use to exercise (cardio and running) 5 days a week
• Feeling anxious - constantly thinking about food and counting calories
• Previously had a ‘very health’ diet, never eats carbs or fat, mostly salads and low fat yogurt and milk.
  • Started eating like this since her late teens, as her mother felt she was too fat, and put her no a low-calorie diet.
• Thoughts of self harm now and admits cutting forarms in late teens. None now.
• Husband doesnt know of her struggles at present, she doesnt want him to know of her previous ED.
Case 4 — what are diagnosis and risks

- Ms F, 25yrs old lady, weight 62Kg (9.7St), Height 166cm (5.4Ft), BMI 23.5
- 22 weeks gestation, unplanned. Denied hx of MH problems at booking.
- Presented hospital feeling dizzy, with palpitations. Bloods showed low potassium and was sent to A&E for iv replacement
- Feeling low in mood, frequently making superficial cuts in her tights when more anxious and distressed about “problems with boyfriend”
- Admits feeling anxious about how she looks and her weight, as now ‘fat’, Was always around 58Kg (BMI 21)
- Not eating all day, which is long standing. After she gets home from work, binges on biscuits and cakes, after which self induces vomiting
- Takes 20 laxative tablets every night – for long years to ‘not gain weight’
- Shoplifting food and is in debt, as spending £50/d in food
- Before pregnancy was drinking 1 to 3 bottles wine every 2 to 3 days
- Hx of childhood sexual abuse
Case 5 – what are diagnosis and risks?

- **Ms R, 39yo**, Referred to PMHS antenatally, as very tearful and anxious saying she is not sure she can carry on with pregnancy, as felt too ‘fat’ and struggled to connect with baby she felt was cause of weight gain. Treated with psychological intervention, inc PIP.

- **Past Hx**: Long Hx of ED problems, BN with purging daily, since 20s. Always BMI 21-26. Never diagnosed of ED. Frequent GP attender, requesting investigations as always worried about her health and frequently thinking she had a serious illness like cancer. Nil other risks to self or others.

- **Review at 5 weeks PN**: was feeling reasonably well and exclusively breastfeeding which she felt was hard as baby was on the breast all the time but felt bonded. Some worries about baby’s health and eating. Nil risks.

- **Review at 3 months PN**: had lost all pregnancy weight but expressed she felt still too heavy. Still exclusively breastfeeding, but worried that baby had drop 2 centiles in weight recently. HV and GP were investigating for reflux and food allergies. She was eating a restrictive diet for her baby’s allergies. Sleep was poor. Anxiety high.

- **Review at 7 months PN**: presented very slim and tired, was 6Kg (1ST) lower than before pregnancy. BMI 17. Happy with her weight but feeling could lose little more. Purging 1-2 times a week when feels ‘ate too much’. Still breastfeeding and weaned baby but worried about ‘his allergies’, so he was on ‘a gluten and lactose free diet like her’. His weight continued low.
Brain needs 500 kcal/day

Starvation impairs brain function

↓ Neuroplasticity
↓ New learning
↓ Executive function (rumination; feeling stuck)
↓ Emotional regulation (avoidance, excess control)
↓ Social cognition (isolation)
↓ Global connection (fragmented, overly detailed)
How starvation affects the body

- Sensitivity to cold

Lung oedema
Spontaneous pneumothorax
↓HR
Pericardial effusion
Heart arrhythmias
Sudden death.

- Ankle swelling due to ↓ protein production
- ↑ LFT & Impaired clotting
- Jandice
- Liver failure
- Death (very severe cases)

- Anaemia & tiredness
- ↓ WCC, N &L with ↑ risk infections
- Thrombocytopenia (↑ risk bleeding)
- ↑ Cholesterol
- ↓ Iron, Folate and Vit B12
- ↓ Mg, P & Ca &Vit D
- Osteoporosis & ↑ fractures

Alopecia, Lanugo” hair (grow downy hair on body)
Dehydration and dry skin
Dizyness and fainting
Muscle weakness and sores

Dental erosion

- Difficulty swallowing
- Shrieked stomach and cramps
- Gastroparesis & slow emptying
- Constipation

- ↑ Risk of Pyelonephritis (renal infections)
- ↑ Risk of nephrolithiasis (kidney stones) - Renal failure

- Amenorrhea & late or arrested puberty + growth restriction
- ↓ libido & infertility
- Double incontinence & uterine prolapse
- Frequency (often overnight)
How purging affects the body

- Erosed and Tooth decay (acid)
- Cuts to mouth & tongue (fingernails)
- Parotid enlargement
- Coarse voice (damage vocal cords)
- Increase salivary amilase enzyme

- Cuts & abrasions in hands (from teeth)
- "Russell's sign“ - callus on back of hand (acid damage)

- Oesophagitis & ulcers (Acid damage)
- Mallory-Weiss tears (tears esophagus) & hematemesis (vomit blood)
- Boerhaave syndrome (ruptured oesophagus)
- Acid reflux
- Esophageal cancer (rare)

- Seizures, cerebral oedema (electrolyte imbalance)
- Regular vomiting changes brain processes, making more likely to binge eat in the future
- Depression & Anxiety (35 to 70%)
- Alcohol & substance misuse (20-30%)
- Post traumatic stress (37%)
- EUPD – Borderline type

- Irregular heart beat (↓ K)
- Sudden death.

- Gastroparesis & cramps (when eating)
- Heartburn (Gastric reflux), ulcers
- Irregular bowel movements
- Rectal prolapse

- Kidney Failure (electrolyte imbalance, mostly K)
- Edema (swelling)
- Dehydration
How binging affects the body

- Sleep apnoea
- Depression
- Anxiety
- Shame
- Isolation

- High blood pressure
- Heart disease as a result of elevated triglyceride levels
  - Increase risk of MI

- High cholesterol levels
- Type II diabetes mellitus (NIDDM)
- Gallbladder disease
- Obesity

Arthrosis & difficulty mobilizing
Consequences of tablets abuse

**Laxatives:**
- Diarrhoea, constipation & dependence
- Rectal prolapse, hemorrhoids, and hematochezia
- Fluid swings with big weight fluctuation & dehydration
- Do not actually cause any significant calorie loss!!

- Cathartic colon syndrome (rare but more severe) – from stimulant laxatives that can damage nerves and ultimately can lead to need for surgery to remove colon.
  - No exact amount of time or quantity of abuse needed to cause
  - Important to cease abuse of laxatives that contain: senna, cascara, phenolphthalein, or bisacodyl (dulcolax) asap
  - constipation can be allayed with osmotic laxative like lactulose
Tablet abuse (cont)

• **Diuretics**
  • Nephrotoxicity, acute tubular necrosis & renal failure

• **Thyroid hormone**
  • Anxiety, mania, insomnia
  • Palpitations, arrhythmias, stroke.

• **Orlistat**
  • diarrhoea, flatulence & faecal incontinence

• **Amphetamines**
  • Anxiety or even psychosis, irritability, euphoria, violent behaviour
  • MI, heart failure, arrhythmias, palpitations, stroke, seizures, coma...
  • Dependence and they are Illegal!!
Co-morbidities in ED

- Anxiety
- Depression
- OCD and/or anankastic traits
- Substance misuse
- EUPD/ PD traits
- High risk of PND & Relapse from ED in perinatal period
ED in perinatal period

Triggering and Contributing factors in perinatal period:

- Change in body shape and weight increase - common in pregnancy
- Can take at least 6 months for body to return to pre-pregnancy
- Baby is frequently priority in pregnancy

Pregnancy – UNIQUE OPPORTUNITY FOR –DIAGNOSIS & TREATMENT

- Some women and some types of EDs, improve in during pregnancy
- Reduction of SIV and laxative use
- Common new onset or continuation of BED
- Increase symptoms in women with past EDs, including post natal
- High levels of weight and shape concerns

Post natal

- High risk of relapse of ED
- High risks of PND

Bulik, 2007; Micali, 2007 and 2010; Easter at al, 2013; carter at al, 2003; Mazzeo at al, 2006; Morgan at al, 2006
When to be worried

Presentation:
• Denial previous ED hx, guarded, dismissive/only speaking food, appetite
• Poor weight gain in pregnancy or rapid weight loss AN and/or PN
• Small for gestational age baby - uterine measure/scan
• Baby weight loss and poor weight progression PN (breastfeeding)
• Looking slimmer, baggy clothes
• Prolonged nausea/ hyperemesis in pregnancy - no response to any r/
• Decline to discuss weight/food&drinking intake/compensatory mec

Symptoms
• Psych Sx: very rigid/controlling thinking, abnormal beliefs about their weight/body shape, severe anxiety, low mood, low energy levels, suicidal, ...
• Physical Sx: Shortness of breath, oedema, cramps, confusion, stabbing epigastric pains,...abdominal distension, chronic constipation
• Bloods: Low K/Na, anaemia, neutropenia, raised T cholesterol, increased amylase & LFTs, ECG changes/arrythmias
Risk of death in Eating Disorders

- Deliberate self harm (DSH)
- Suicide
- Starvation
- Compromised immune system eg. Infections
- Electrolyte imbalances - cerebral oedema or cardiac arrhythmia
- Re-feeding syndrome
- Metabolic syndrome
Risks from DSH and Suicide

**AN:** High mortality:
- Standardized mortality rate 6.2 to 10.6%*
- 50% due to suicide
- Higher expectation of dying (↑sense burdensomeness, ↓threshold pain and sense of belonging)
- Suicide attempts in AN more lethal than in BN & non-ED suicide attempters
- Possibly people with AN more physically unwell

**BN:** Mortality rate (non suicide as cause) 1.7/1000 people (vs 5.1/1000 in AN) *
- Mortality rate suicide similar to non ED people†
- Increase rate suicide attempts in BN, but not completed suicide#
- About one third of BN patients self-harm$*
- One third have at least one suicide attempt*
- Lifetime suicide attempt 26.9%&

**BED:** Few studies - ↑odds of suicide attempts
- at least one suicide attempt in lifetime*

Kostro at al., 2014*, Papadopoulos et al., 2009; Guillaume et al., 2011, Selby et al, 2010; Franco at al., 2006#, Crow et al., 2009$, Forcano at al., 2009&
DANGER SIGNS to physical Health

BMI range: < 13 or rapid weight loss (>1kg per week)

- Tetany (severe continuous muscle cramps)
  - Liver enzymes (LFT’s) ↑
    - ↓ Sodium
    - ↓ Potassium
    - ↓ Phosphate
- ↓ Glucose
- Difficulty arising from squat/sit up
- seizures, Coma
  - Arrhythmias
  - Syncope
  - HR<40bpm
  - BP<80mmHg
  - Postural drop>20mmHg
  - ↓ Hemoglobin
  - ↓ White blood cells
  - ↓ Platelets
- Petechial rash
- Ulcers
Re-feeding syndrome

**Risk factors:**
- BMI below 16
- Very low food intake over the previous 10 days
- Weight loss of >15% total weight in past 3-6 months
- Low White Blood Cell Count
- Low potassium, phosphate or magnesium before re-feeding

If unrecognised can lead to death!

Requires: inpatient care
slow increase in food intake

**Defined as:** the potentially fatal metabolic disturbance caused by reintroduction of food, (whether enterally – oral or by NG tube or parenterally), after a period of starvation.

**Starts within 4 days up to 2 weeks after re-start eating**

**Sx:** Muscle weakness, low BP, increase heart rate, shortness of breath, palpitations (cardiac failure/arrhythmias), swelling, abdominal pain, neurological symptoms: confusions, seizures
What is it like to be a woman with an ED?

with ED and pregnant?
What Women say:

**Pregnancy**
- **1st Trimester:**
  - I Feel too sick to eat
  - ‘I am too fat, I cant look at myself’
  - ‘I feel huge’ ‘Nothing fits me anymore’
  - ‘I cannot stop vomiting. Medications don’t work’
  - ‘I don’t feel connected to my baby’
  - ‘I feel out of control’
  - ‘I cannot stand my husband touching the bump’

- **2nd/3rd Trimesters:**
  - ‘People keep commenting of my big baby and makes me feel like a whale’
  - ‘I need this baby out as cannot cope more with how I look’

- **Some women – ED remains active throughout**
  - ‘Baby is a good reason for my weight’

**Post natal**
- ‘I look disgustingly fat’
- ‘I worry about my baby’s weight and eating’
- ‘The only thing I think is my weight and my body’
- ‘my mind keeps telling me to restrict’
- ‘I look awful’
Complications of ED in the perinatal period

- Preconception and fertility
- Gynaecological & Obstetric
- Delivery and birth outcomes
- Post natal risks
- Impact on the child
- Family and carers
- Risks specific of EDs
Preconception and fertility

- ED associated with menstrual dysfunctions and ovulation problems

- Studies have conflicting results:
  - Reduced fertility in 1/3 women with Anorexia Nervosa (Brincg at al, 1988)
  - Pregnancy rates in AN and BN comparable to general population (crow at al, 2002; Bulik at all, 1990)

- EDs are common in women seeking fertility treatments:
  - 16.7% and 20.7% attending fertility clinics met criteria for an ED (Stewart at al, 1990; freizinger, 2008)
  - 58% women with amenorrhea or oligomenorrhea had an ED

- ALSPAC study: (Easter at al, 2011)
  - Women with AN or BN found to take longer than 6 month to conceive
  - AN and BN are 3x more likely to receive help to conceive
  - No difference between BN and general Population
OB-GYN complications of ED

Gynaecological:
- ↓ FSH, LH
- Amenorrhea, oligomenorrhea or irregular menstruation
- Reduced uterine/ovarian size and endometrial lining
- Reduced libido
- Reduce ovulation and Infertility, but some do get pregnant!!

Obstetric:
- ↓ or ↑ weight gain (AN-BN/BED)
- Gestational diabetes (BED)
- Microcephaly
- Delayed episiotomy repair
- Less likely give birth to boy (AN and BN) – male foetus require more calories and more fat intake during gestation

Delivery and birth outcomes

• Higher rate of CST
  • but not of vacuum extraction (Kiwi/ventouse) or forceps
• In severe AN without adequate weight gain - higher risk of:
  • intrauterine growth restriction, small for gestational age (active or past AN)
  • pre-term delivery
  • breech presentation
  • vaginal bleeding
  • low apgar scores
• In BN
  • Increase risk of miscarriage 2x
• IN BED
  • Increase risks of LGA 3x (9.6% vs 2.5%)
  • GDM

Post Natal risks in perinatal ED

• ↑ relapse rate of ED: ↑ concerns weight/body image & big and rapid weight loss
  • Way to cope with stress & adjustment to motherhood and sleep deprivation
  • Women are alone long period so easy to return ED behaviours

• ↑ risk of Antenatal depression (36 to 39%-59%, AN-BN respectively)

• ↑ risk of PND and anxiety (40-46%, in 1/3 women with BN)
  • ~ to risks in women with major depression without ED

• ↑ risk of poorer outcome for child eg. increase risk of depression in offspring later in life & poorer school achievements – particularly in boys

• Higher if previous Hx of trauma or abuse
  • Independent risk for: perinatal depression, & pregnancy complication like miscarriage, hyperemesis, premature contractions and delivery complications
  • More frequent in ED purging subtypes (62% vs 29%)

Impact of maternal ED on the child:

Breastfeeding
- Used as a way of losing weight quicker, long term breastfeeding
- \(\downarrow\) when high body dissatisfaction - early introduction of formula

Physical growth and development
- Growth restriction - mothers with AN

Feeding and eating habits and attitudes
- Eating difficulties (by age 5)
- Body shape and weight concerns (by age 10)
- Dietary restrain by age 10
- Overweight children (mothers chronic depression in high S-E)

Mealtimes
- Increase conflict and negative expressed emotions from mothers with EDs
- Reduced positive reinforcement
- Use of food for non nutritional purposes eg. Reward/soother

Field at al, 2010; Stein & Pearson at al, 2014; Faster et al, 1996; Waugh & Bulik, 1999; Micali et al, 2009;
Family/Partners

- Eating Disorders have a very high burden on family/partner:
  - frequently battle regarding food & worrying they are to blame
  - high emotional and economic cost on them
  - Constant worry for health, growth and development of the child

- Carers of anorexic patients:
  - Report similar difficult experiences as those caring for adults with psychosis
  - High levels of psychological distress
  - Frequently kept in the dark

- Treatment is more successful when family is involved (Adults and YP)
  - Like at other times, in perinatal period family/partner/FOB are very important and it is important they are involved in the treatment as much as possible
Maternity challenges

- It is frequently assumed that Women with ED don’t get pregnant
- Maternity staff don’t have training or knowledge about EDs
- Women with EDs frequently don’t disclose their mental illness(es)

Presentations in maternity

- Some (early) pregnancy symptoms may be confused with EDs symptoms eg. Nausea, hyperemesis, reduced food intake
- Poor foetal growth – +++end 2T and 3T
- Poor weight progression – lack regular weighing
- Pre-term labour, pre-eclampsia, GDM, early IoL, poor suture repair
- Lack cooperation, non attendance

Risks

- High risks of ED relapse during pregnancy and +++ post delivery – unnoticed/undiagnosed/untreated
- Sudden presentation in crisis: Physical &/or Mental
When to refer to ED service

- Active physical and/or mental symptoms of an eating disorder
  - Woman visibly distressed about how they look, with feelings out of control
  - Food and eating dominates their life
  - Restrictive activities/interests (including baby)
  - Compensatory mechanisms

- Abnormalities in weight progression (especially if weight loss)
- Hyperemesis – SIV – +++ if more than 1-3 times a day
- Abnormalities in the bloods
- Moderate to severe/very severe ED

- Woman’s and Family or friends expressing concerns
Eating Disorders screening

1\textsuperscript{st}: Hyperemesis gravidarum - Assess if presence & severity
Treat aggressively if required
2\textsuperscript{nd}: Exclude or confirm Eating disorder – \textbf{SCOFF screening questions:}

5 questions of \textbf{yes} or \textbf{no} answers:

- Do you make yourself \textbf{S}ick?
- Do you worry that you have lost \textbf{C}ontrol over how much you eat?
- Have you recently lost more than \textbf{O}ne stone (6Kg) in a 3-month period?
- Do you believe yourself to be \textbf{F}at when others say you are too thin?
- Would you say that \textbf{F}ood dominates your life?

If answer \textbf{YES} (1 or more)

- Referral to Local Eating disorder
- Referral to specialist Dietitian
- Recommend named obstetrician, caseload and MH mw, Enhanced HV
- Inform maternity of risks
Investigations in ED

- Haematology (FBC)
- Chemistry (U&E, Creatinine, LFT, Albumin, CK, Bilirubin, lipid profile, bone profile, Amylase)
- TFT, ESR, CRP, & Glucose, HbA1c, Vit B12, Magnesium, Phosphate, Vit D, folate, Iron
- Celiac disease screening

- BP, Pulse, temperature
- ECG (baseline below BMI 16 or purging + as needed)

- Growth scan of unborn – Maternity
- Growth of baby (regular measures weight and length of baby post delivery, plus monitoring of food intake) – H/V or GP
<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>Test * or Investigation</th>
<th>Low Concern</th>
<th>Concern</th>
<th>Alert</th>
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<tbody>
<tr>
<td>Nutrition</td>
<td>BMI</td>
<td>&lt;14</td>
<td>&lt;12</td>
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<tr>
<td></td>
<td>Weight loss/week</td>
<td>&gt;0.5 kg</td>
<td>&gt;1.0 kg</td>
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<tr>
<td></td>
<td>Skin Breakdown</td>
<td>&lt;0.1 cm</td>
<td>&gt;0.2 cm</td>
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<tr>
<td></td>
<td>Purpuric rash</td>
<td>+</td>
<td></td>
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<tr>
<td>Circulation</td>
<td>Systolic BP</td>
<td>&lt;90</td>
<td>&lt;80</td>
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<tr>
<td></td>
<td>Diastolic BP</td>
<td>&lt;70</td>
<td>&lt;60</td>
<td></td>
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<tr>
<td></td>
<td>Postural drop (sit –stand)</td>
<td>&gt;10</td>
<td>I</td>
<td>&gt;20</td>
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<tr>
<td></td>
<td>Pulse Rate **</td>
<td>&lt;50</td>
<td>INP</td>
<td>&lt;40</td>
</tr>
<tr>
<td>Musculo-skeletal (Squat Test and Sit up test)</td>
<td>Unable to get up without using arms for balance</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unable to get up without using arms as leverage</td>
<td>P</td>
<td>PAT</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Unable to sit up without using arms as leverage</td>
<td>A</td>
<td>PAT</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>Unable to sit up at all</td>
<td>T</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WCC</td>
<td>&lt;4.0</td>
<td>&lt;2.0</td>
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<td></td>
<td>Neutrophil count</td>
<td>&lt;1.5</td>
<td>&lt;1.0</td>
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<tr>
<td></td>
<td>Hb</td>
<td>&lt;11</td>
<td>&lt;9.0</td>
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<tr>
<td></td>
<td>Acute Hb drop (↑MCV &amp; MCH no acute risk)</td>
<td>N</td>
<td></td>
<td>+</td>
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<tr>
<td></td>
<td>Platelets</td>
<td>&lt;130</td>
<td>&lt;110</td>
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<tr>
<td>Salt /water balance</td>
<td>K+</td>
<td>&lt;3.5</td>
<td>&lt;3.0</td>
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<td>Na+</td>
<td>&lt;135</td>
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<tr>
<td></td>
<td>Mg++</td>
<td>0.5-0.7</td>
<td>&lt;0.5</td>
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<tr>
<td></td>
<td>Phosphate</td>
<td>0.5-0.8</td>
<td>&lt;0.5</td>
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<tr>
<td></td>
<td>Urea</td>
<td>&gt;7</td>
<td>&gt;10</td>
<td></td>
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<tr>
<td>Liver</td>
<td>Bilirubin</td>
<td>&gt;20</td>
<td>&gt;40</td>
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<tr>
<td></td>
<td>Alkpase</td>
<td>&gt;110</td>
<td>&gt;200</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AsT</td>
<td>&gt;40</td>
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<td>ALT</td>
<td>&gt;45</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>GGT</td>
<td>&gt;45</td>
<td>&gt;90</td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>Albumin</td>
<td>&lt;35</td>
<td>&lt;32</td>
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<tr>
<td></td>
<td>Creatinine Kinase</td>
<td>&gt;170</td>
<td>&gt;250</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Glucose</td>
<td>&lt;3.5</td>
<td>&lt;2.5</td>
<td></td>
</tr>
<tr>
<td>ECG (if BMI&lt;15, low K+, drugs prolonging QTC prescribed)</td>
<td>Pulse rate</td>
<td>&lt;50</td>
<td>&lt;40</td>
<td></td>
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<tr>
<td></td>
<td>Corrected QT interval (QTC)</td>
<td></td>
<td>&gt;450 msec</td>
<td>+</td>
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<tr>
<td></td>
<td>Arrhythmias</td>
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<tr>
<td>Differential Diagnosis</td>
<td>TFT, ESR</td>
<td></td>
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</tr>
</tbody>
</table>
Recommendations if active ED

In pregnancy:

• If BMI <18.5 - ideal weight gain between 12-18Kg
• Close monitoring of both nausea and vomiting; treat aggressively
• Monitoring macronutrients intake (usually less protein and fat)
• Monitoring micronutrient intake & recommend supplements:
  ✓ Folic acid
  ✓ Multivitamin and mineral with iron, Vit A, B and iodine – T/d
  ✓ Vit D

Recommendation if active ED

**In Breastfeeding:**

- Way to lose weight or may be too preoccupied to breastfeed
- Need for additional 500-600 Kcal/day to sustain breastfeeding
- Food restrictions may impact on milk quality (less volume and particular ↓fat content) - Mixed feeding
  - HV monitor baby’s growth and development
- ? Impact on child outcome (neurological development) and weight trajectory

Recommendations for Women with EDs

• **Women with active ED wishing to conceive, should be:**
  • advised to postpone pregnancy, until they have received specialist treatment for ED and are largely recovered
  • Screened/treated for abuse of: laxatives, appetite suppressants, or diuretics, which may not be safe in pregnancy.

• **Perinatal women with ED:**
  • Preconception or in early pregnancy, education about:
    • body changes, cravings, and hyperemesis gravidarum
    • expected weight gain and nutrition during pregnancy and impact on fetal growth
  • **Active ED** - Joint care, with midwives/obstetricians and ED/perinatal psychiatric services/GP – **Caseload, MH M/w and named Obstetrician**
  • **Past ED** – Monitoring for signs relapse of ED and co-morbidities - by maternity, GP, perinatal service – past HX
  • **Support in breastfeeding/feeding:** enhanced m/w care + health visitor to monitor infant growth and development/weaning
  • Monitoring for postnatal depression and relapse of ED is essential for early detection and treatment
  • Involving the partner as much as possible, throughout the pregnancy and postpartum period - improves outcomes
Medication in EDs

- Almost exclusively to manage co-morbidities
- Should be managed ideally by an Eating disorder service
- Perinatal service should advice on medications in perinatal period

- Low weight pts = higher doses of psychotropic medications - +++ BMI <16 - response is poor at low doses and takes longer for action.
- Recommendation is quickly titrate medication to maximum dose

- Be aware that certain medication, eg paracetamol or antibiotics may require pediatric doses according to liver function
Treatments for frequent non-psychiatric Sx

- Confirm that blood results were checked, and supplements were as required (GP should prescribe according to bloods)
  - Multivitamin and mineral preparation 1 tablet daily all underweight patients or restrictive diets
  - Calcichew D3 Forte T bd
  - Dioralyte prn after purging (replaces K)
  - Vit D as per blood results

If BMI Less 17.5 and severe underfeeding: Multivitamin 2T a day for 1/12, reduce to 1T/d
  - Thiamine 100mg per day or 50mg qds
  - Vit B co-strong 1T tds

Symptom relief:
- Abdominal cramps R/ Mebeverine 135mg tds, 20 mins before meals (smooth muscle relax) – not recommended - no evidence of safety in pregnancy!
  - Metoclopramide 5-10 mg tds, 20 mins before meals (↑ bowel motility)
- Constipation R/ Fybogel – 1st line – must be given regularly
  - Lactulose – 2nd line - need plenty of fluids to be effective
Medication in EDs, relatively safe in the perinatal period

Should be always managed by ED and perinatal MH services

www.medicinesinpregnancy.org

- For AN: R/olanzapine - helpful improve weight gain, treatment adherence and psychological symptoms

- For BN: High dose SSRI (eg fluoxetine 60mg, sertraline 200mg), may reduce the frequency of binging and purging

- For BED: Topiramate reduces bingeing, and improves weight loss when combined with psychological treatment;

Treatment of Eating Disorders: depends on RISK

HIGH RISK (AN, BN):
BMI ≤ 13, rapid weight loss & risk of refeeding synd)
- **Medical Unit or Specialist ED Inpatient unit**
- Use of MHA, NG feeds, assisted feeds
- Re-feeding -0.5-1kg/week, vitamin supplementation, monitor bloods/electrolytes, ECG, Bone scan
- Evidence based talking therapies: individual and group
- Family (carers) therapy
- Occupational therapy/vocational work
- Dietician input
- Medication – limited evidence

MEDIUM RISK: (AN, BN)
- **Day care specialist ED unit**
- Evidence based talking therapies: individual and group
- Family (carers) therapy
- Occupational therapy/vocational work
- Dietician input
- Medication – limited evidence

LOW RISK: (AN; BN, BED, ARFID)
- **Outpatients specialist ED unit**
- Evidence based talking therapies: individual
- Family (carers) therapy
- Occupational therapy/vocational work
- Dietician input
- Self help materials
- Medication – limited evidence
Role of perinatal service - Monitoring and treatment (I)

If active ED and pt accepts referral to ED service:

- **EDS Treatment**: as per guidelines for treatment of EDs
  - Prioritise women in the perinatal period– 2 weeks assessment and 2 weeks for start treatment
  - treatment re-start post natal as soon as possible - 3-4 weeks PN
- **Perinatal service**: discuss AN/PN risks, monitor for co-morbidities and recommend psychopharmacological treatment

If active ED and pt declines referral to ED service:

- **Perinatal/maternity**: get specialist advice from local ED service and discuss sx/observations/investigation results, risks (physical and mental)
- **Perinatal/ED service recommend**: regularity of examination/investigations: weighing +blood investigations (to GP/obstetrician)
- **Referral**: specialist dietician
- **Perinatal**: Discuss AN/PN risks, monitor for co-morbidities and recommend psychopharmacological treatment
- **Psychiatric services**: MCA/MHA assessment – ED severity and risks
Role of perinatal service - Monitoring and treatment (II)

**If active ED and pt declines perinatal and ED referral:**

- **Maternity:** Liaise with Local ED and perinatal services + continue to offer referral to psychiatric services + monitor weight and mental state
- **Perinatal/ED service/GP:**
  - Share information on psychiatric history/risks with maternity
  - Recommendations for monitoring and treatment (mat/GP) + named obstetrician and caseload midwife (plus MH)
  - Recommend enhanced m/w care PN and specialist HV
- **Psychiatric services:** MCA/MHA assessments - severity and risks
- **Maintain GP informed**

**If inactive ED:**

- Maternity and perinatal to monitor for signs of relapse - early referral for EDS for treatment
- **Maternity:** regular weighing, bloods every T and growth scans
- **Perinatal:** Discuss AN/PN risks
- **Perinatal:** Recommend enhanced m/w care PN and specialist HV
Capacity assessment in ED

Frequent decisions at stake:
• To refuse nutrition or nutritional support, eg NG feeding or assisted feeding
• To refuse admission to hospital
• To refuse medical treatment eg potassium replacement
• To take a medication

Is there a reason to suspect lack of capacity?
• Severe emaciation & dehydration
• Refusing to eat
• Agitation and distress
• Low mood & hopelessness
• Suicidal thoughts

Frequent inability to weigh risks and benefits due to:
• Abnormal AN beliefs (I’m fat!, I wont die!, that is others not me)
• Irrational fear of food/weight gain
• Compulsion to restrict, purge, exercise etc... (I am in control!)
• AN - is identity
• Lack of insight (severity)
• Suicidal thoughts

Anorexia nervosa is a disturbance of mind and impairment of brain

USE MHA
Pregnant women & low BMI/eating disorders (EDs) PROTOCOL suggestion

At booking ask screening questions
Take history & Weigh woman

If there has been a history of Eating Disorders (Bulimia and/or Anorexia or BED) or a history of low BMI

Offer

Referral to ED Service
Offer referral to Dietician
Flag on maternity records
Consider referral to PMHS
Refer to ED service
Be proactive if woman DNAs

Add flag to Mat record
Refer to Obstetrician
Consult the ED service for advice about risk

Midwives/Obstetrician, ED/PMHS service to agree action plan to meet the needs of the woman and the unborn baby

Consider referral to Dieticians for further assessment & advice again referral to EDs service

If woman seems to be at high risk

Weigh throughout pregnancy. If low BMI or insufficient weight gain, refer to Obstetrician/Growth Scan

Refer to Vulnerable Pregnant Women’s Forum/Group
Is there a safeguarding issue? Referral to CFSS to be considered
Referral to Early Intervention Health Visitor - monitor baby growth PN

Woman accepts referral to ED service
Woman declines referral to ED service
Learning Points

- Eating disorders are the psychiatric illnesses with highest mortality, 50% by suicide in AN. Same is true for mortality in the perinatal period.

- Eating disorders can affect fertility but unexpected pregnancies can occur.

- They can negatively impact pregnancy outcomes and even though frequently there is remission during pregnancy, relapse is frequent in the postnatal period.

- Eating disorder should be regularly screened during perinatal period, particularly if there are concerns about weight gain and abnormal gastrointestinal symptoms.

- Untreated mental illness in pregnancy can impact child health, growth and development.

- Eating disorders are difficult to treat and treatments are only moderately effective; therefore early intervention is essential for better prognosis and outcomes. Pre-conception advice by perinatal services.

- Management depends on severity and risk factors and should be, whenever possible, administered by specialist ED services. Pregnant/PN women being prioritised

- Psychological treatments are still the treatments of choice at present.
Online resources for Women with ED in perinatal period

- http://www.eatingdisordersandpregnancy.co.uk/

- https://www.babycentre.co.uk/a1042906/eating-disorders-in-pregnancy


- www.b-eat.co.uk/HelpandSupport
Reading recommendations for patients and carers

For Bulimia and Binge Eating:
• Getting Better Bit(e) by Bit(e): A Survival Kit for Sufferers of Bulimia Nervosa and Binge Eating Disorder *by Ulrike Schmidt & Janet Treasure*
• Overcoming Binge Eating *by Christopher G Fairburn*
• Bulimia Nervosa: A Cognitive Therapy Programme for Clients *by Myra Cooper, Gillian Todd & Adrian Wells*

For Anorexia:
• Anorexia Nervosa: A Survival Guide for Families, Friends and Sufferers *by Janet Treasure*

For All diagnoses or EDNOS (Eating Disorder Not Otherwise Specified):

For Carers:
• Sills-based Learning for Caring for a Loved One with an Eating Disorder: The New Maudsley Model *by Janet Treasure, Grainne Smith & Anne Crane.*
• Anorexia Nervosa: A Survival Guide for Families, Friends and Sufferers *by Janet Treasure*
Virginia Woolf

‘One cannot think well, love well, sleep well if one has not dined well’

Thank you!

Catia.Acosta@nhs.net