

STARVATION BEFORE CAESAREAN DELIVERY - DO WE MEET THE STANDARDS?

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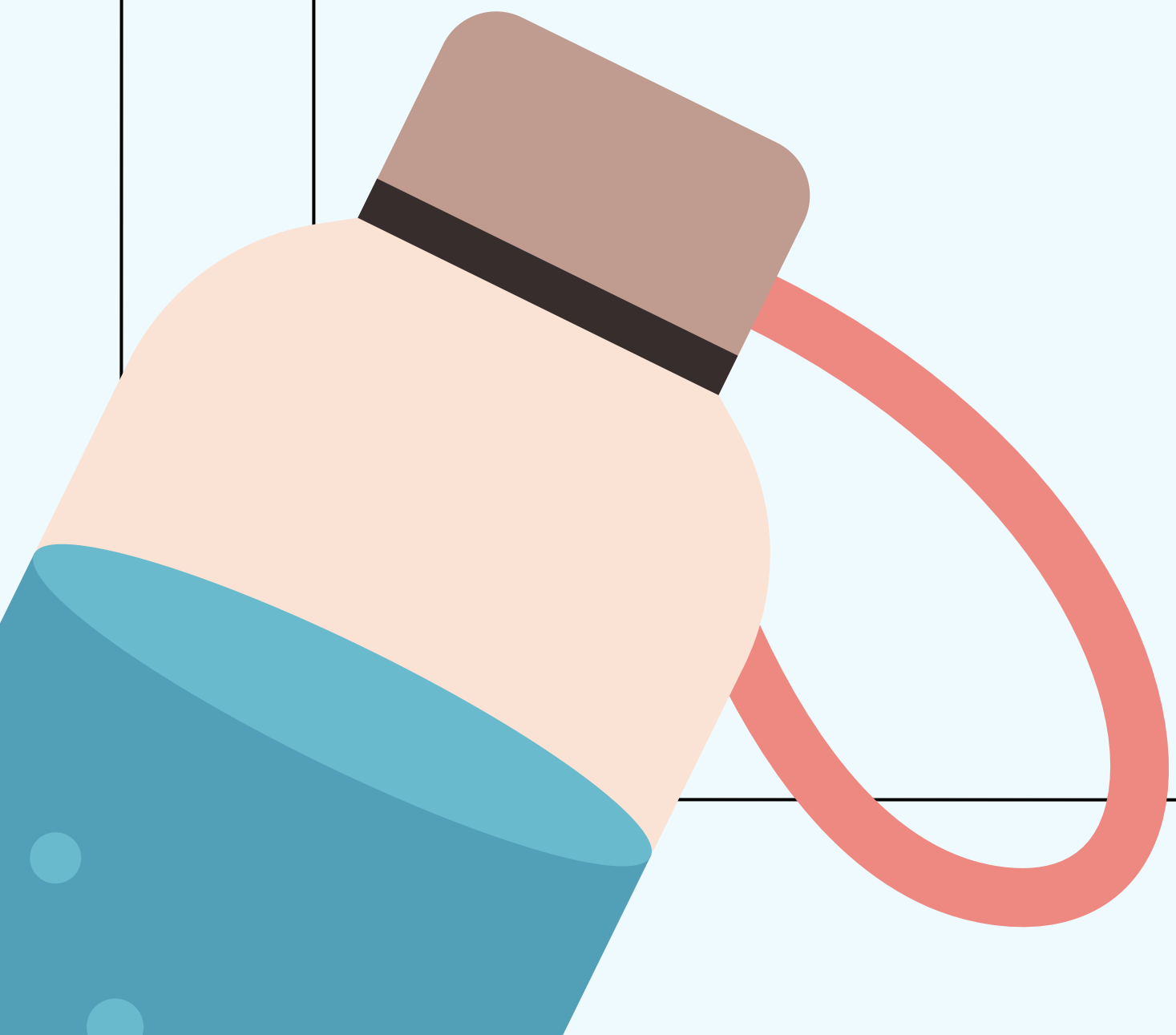
1. INTRODUCTION

- Most enhanced recovery (ERAS) guidelines for caesarean delivery (CD) recommend fasting of 2 hours for clear fluids and 6-hours for solids prior to a neuraxial or a general anaesthetic for CD.[1]



2. METHODOLOGY

- We prospectively reviewed starvation times for 75 patients undergoing elective [category(cat)-4] or scheduled (cat-3) CD from June to November 2022 to assess the number of patients who met the recommended trust standards for starvation.
- Side effects experienced by these patients prior to the CD were also recorded.
- Starvation times for those having CD in the morning (am) were compared to those having the CD in the afternoon (pm).
- Results are presented as median [interquartiles], count (%) and median difference (95% confidence interval).
- Mann-Whitney U-statistics were used for statistical analysis with P<0.05 (two-sided) as significant.

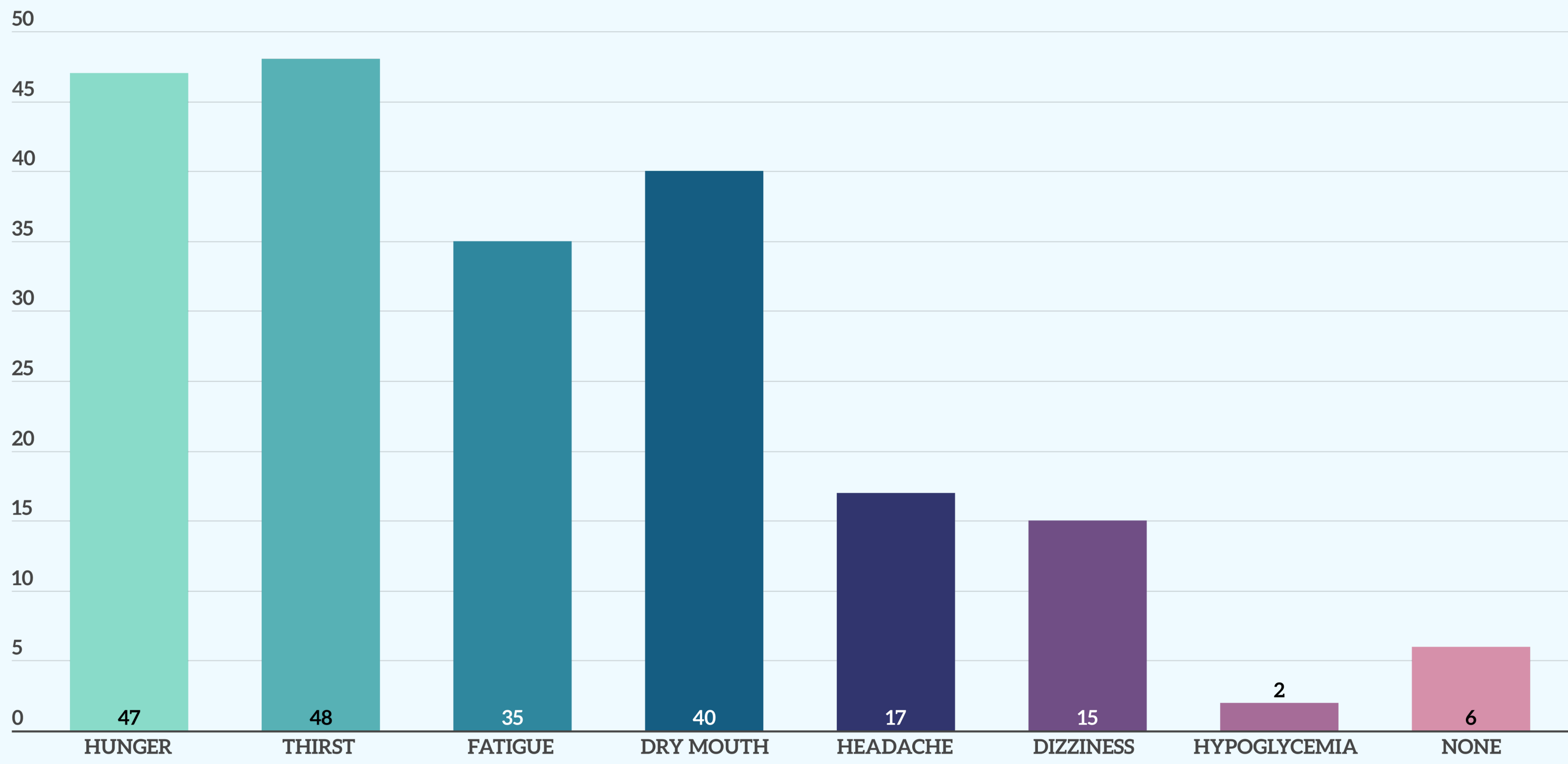


3. RESULTS

- The maternal demographics and the characteristics of patients, along with the mean starvation time for clear fluids and solids, are highlighted in table 1.
- A cat-4 CD was recorded in 55 patients (73.3%) whilst cat-3 CD was recorded in 20 (26.7%).
- Diabetes (21.3%) was the most common co-morbidity observed in this cohort.
- Fasting times (Table 2) for liquids was significantly (P=0.0091) longer for CS in the afternoon, not for solids (P=0.69).
- Only two patients (3.6%) of all cat 4 CD met the standards for clear fluids whilst none (0%) of the patients met standards for solids. For cat 3 CD, none (0%) of the patients met standards for clear fluids whilst only two patients (10%) met standards for solid food.
- Thirst (64%), dry mouth (53%), Hunger (49%), fatigue(46%), dizziness (20%) were the most common side effects reported by patients whilst hypoglycaemia was recorded in 2.7%. (Fig 1)

	Category 3 CD n=20	Category 4 CD n=55
Age (years) [Mean +- SD]	31.25 +-6.60	33.36 +-5.25
BMI (kg/m2) [Mean +- SD]	28.24 +-5.94	28.29 +-6.6
Primiparous n (%)	8 (40%)	10 (18%)
Multiparous n (%)	12 (60%)	45 (82%)
Comorbidities n (%)	5 (25%)	20 (36%)
Diabetes	3	13
Hypertensive disorder	0	3
Thyroid diseases	1	4
Other*	5	7
None	13	34
Starvation clear fluid (hours) [Mean +- SD]	5.26 +-2.86	4.82 +-2.20
Starvation solid (hours) [Mean +- SD]	12.28 +-3.90	11.38 +-2.40

Table 1 – Demographics and starvation times of patients having a Caesarean delivery (CD)
Other co-morbidities* include - Psoriasis, Beta thalassemia, Haemophilia, SLE, Sjogrens syndrome, Crohns dis. and bronchial asthma



STARVATION SYMPTOMS
Figure (1)

	CD in morning n=37	CD in afternoon n=38	Difference (95%CI)	P
Starvation for clear fluids (hours)	4.00 [3.00, 4.88]	5.25 [3.68, 7.08]	1.25 (0.50, 2.25)	0.0091
Starvation for solids (hours)	11.50 [10.50, 12.75]	11.63 [8.94, 15.06]	0.25 (-1.25, 2.00)	0.69

Table 2 – Starvation times of patients having a Caesarean delivery (CD) in morning and in afternoon

4. DISCUSSION

- Our audit suggests that prolonged fasting times are observed in patients coming for elective or scheduled CD.
- Few patients meet the recommended national standards for starvation before CD.
- Our findings suggest a wide variation in starvation times that are possibly dictated by the scheduled start time of CD and availability of theatres along with staffing in our tertiary unit.
- Factors leading to a long starvation time for solids prior to the planned CD in the ERAS era and the associated perioperative maternal and neonatal effects need further research.
- Significant symptoms of dehydration including hypoglycaemia are experienced by pregnant patients listed for CD.
- Better multidisciplinary education, improved communication between anaesthetist's and midwives, drink on arrival strategies and a "think drink" strategy at WHO brief along with regular audit may decrease clear fluid starvation time.



5. REFERENCES

[1] Wilson R.D., Caughey A.B., Wood S.L., et al. Guidelines for antenatal and preoperative care in cesarean delivery: enhanced recovery after surgery society recommendations (Part 1), American Journal of Obstetric and Gynecology. 2018; 219: 523-532