

Retrospective analysis of changing trend of obstetric hysterectomy over last two decades

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Background of study

- Post-partum hemorrhage(PPH) defined as > 500 ml & >1000 ml blood loss after vaginal delivery & caesarean section (CS) respectively.
- Incidence of PPH is 4.9% for vaginal deliveries, 18.4 % for instrumental deliveries, 8.5% for elective CS & 19.8% for emergency CS¹.
- In India, PPH, which is exacerbated by widespread anemia among pregnant women, accounts for 38% of maternal deaths (SRS 2001-2003).
- Delivering critical care in obstetrics in developing countries like India is quite challenging, particularly in rural set up².
- Obstetric hysterectomy(OH) is a lifesaving surgery in severe PPH where all conservative treatment fails.
- Modern obstetrics has changed over last two decade with significant increase in CS rate³.

Aims & Objectives

- Primary objective of our study is to observe the changing trends of OH over last two decades with changing obstetric practice.
- Secondary objective is to study Incidence, demographic & clinical profile of OH patients.

Design & Methods

- Study design: Retrospective observational and comparative study from single rural tertiary care referral center of Western India.
- Study time: January 2001 to December 2021.
- Inclusion criteria: All patients who underwent OH during her pregnancy or within 42 days after pregnancy termination included in study.
- Hospital ethical committee approval taken.
- Data extraction: Medical record department & Birth register.
- Descriptive statistics, Chi square test, Fischer exact test &Incidence rate to ratio applied with the help of SPSS 28.0.1 software.
- There were total 19666 delivery in study period. Overall incidence of OH is 0.9% ,with 0.3% in vaginal delivery & 1.52% in CS.

Results

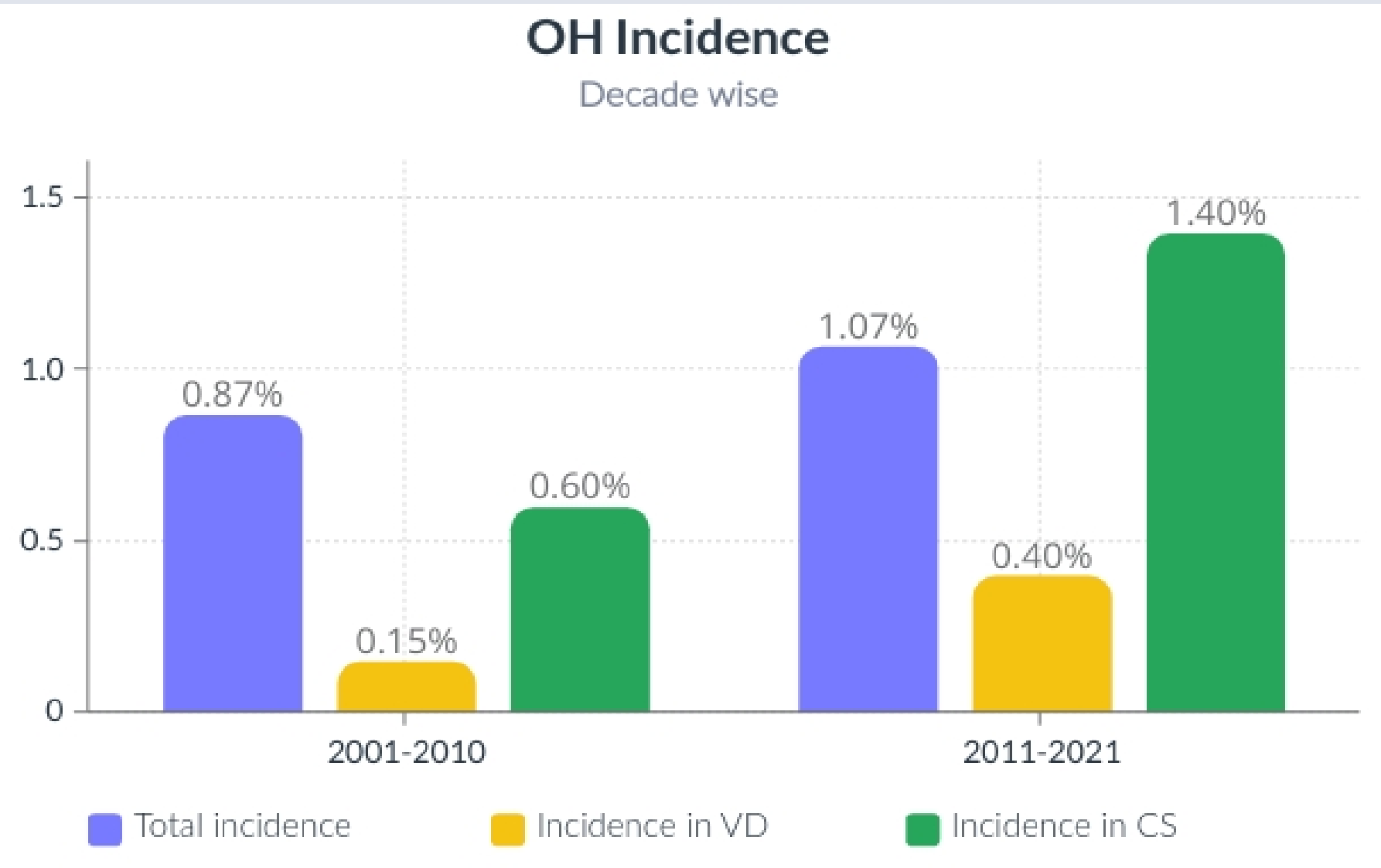
- Total 195 OH were conducted in study period.

Table 1:Decade wise OH distribution with mode of delivery.

Decade	No. of OH	No of total delivery	No of vaginal delivery	No of CS
2001-2010 (1st decade)	70	8025	5026	2999(37.3%)
2011-2021 (2nd decade)	125	11641	5921	5720(49.13%)
Total	195	19666	10947	8719(44.33%)

- ❑ Incidence of CS significantly increased in 2nd decade.(P<0.0001)

Figure 1:Comparision of OH incidence decade wise.



- ❑ Incidence of OH increased in CS in 2nd decade of study timeline. 0.6% Vs 1.4% (p,0.04)

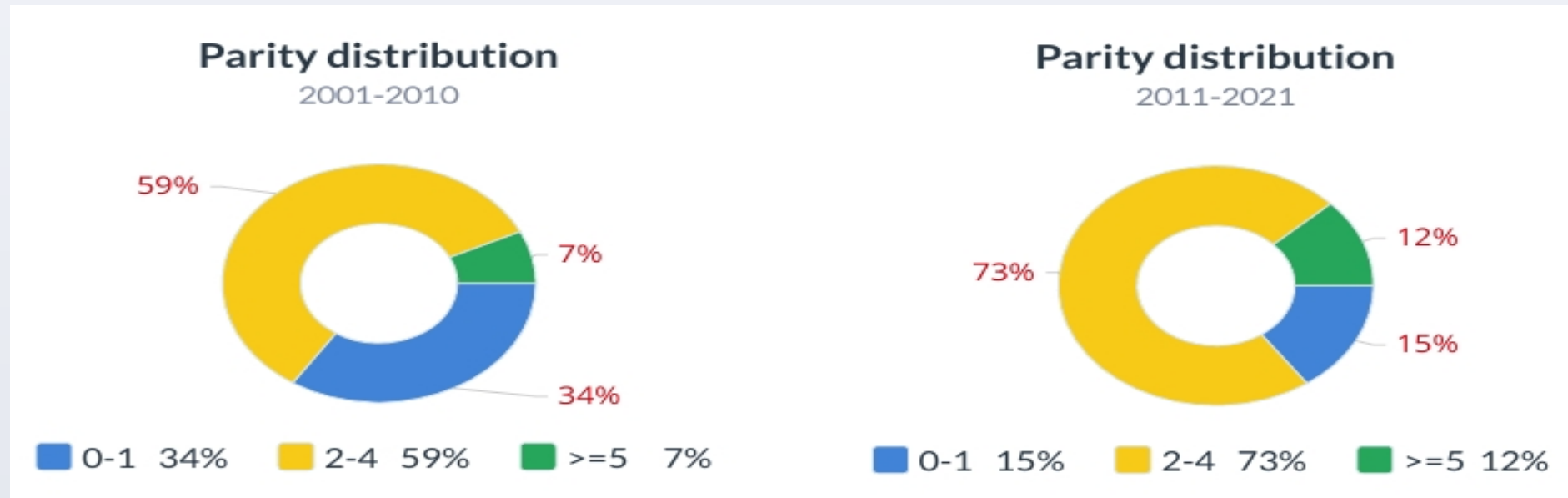
Table 2:Demographic parameters of patients.

Demographic parameters		No of patients(n=195)
Age	<20 yr	7(3.5%)
	21-30 yr	135(69.2%)
	>30 yr	53(27.17%)
Parity	Primi	43(22.05%)
	Multi	132(67.6%)
	Grand multi(> 5)	20(10.2%)
Booking status	Book	26(13.3%)
	Refereed	171(87.6%)
Type of hysterectomy	Total	95(48.7%)
	Subtotal	100(51.2%)

- ❑ Median age was 28yr (IQR 21-35),Median parity 2(IQR1-3)
- ❑ Majority of patients were referred, as our hospital ia a rural tertiary care referral center

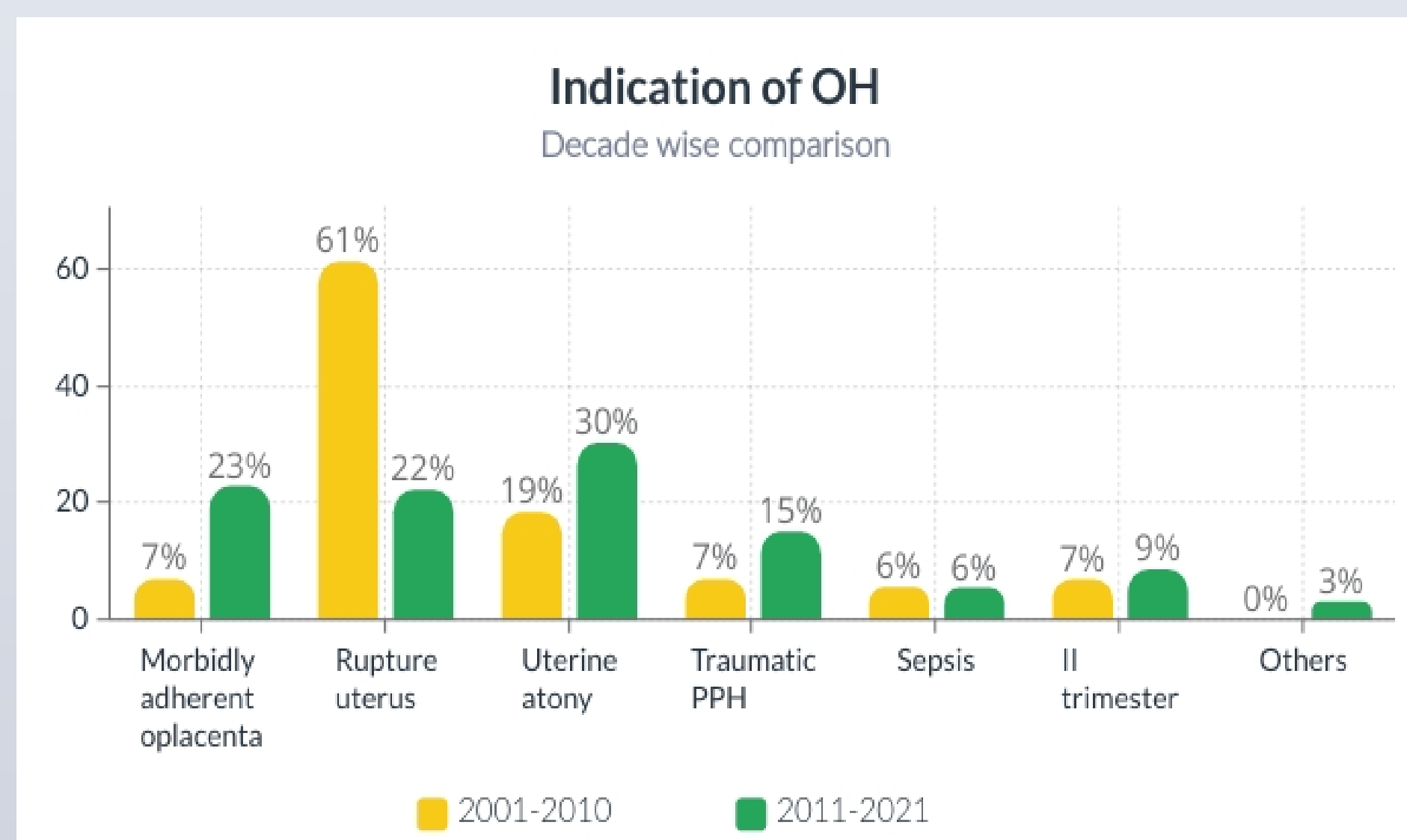
Results

Figure 3:Parity wise OH comparison.



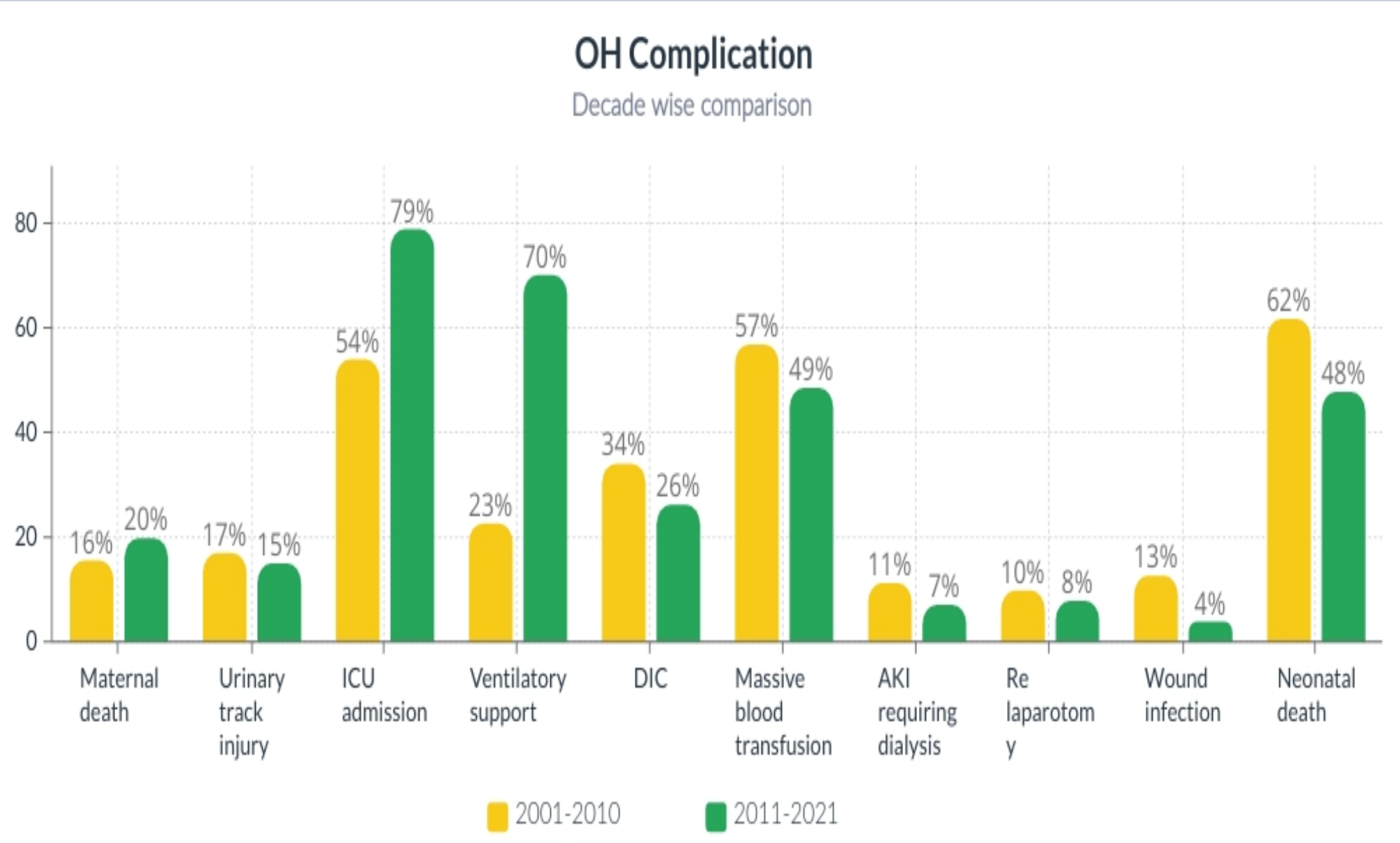
- ❑ In 2nd decade of study timeline, OH significantly decreased in primigravidas. 34% vs 15% (p,0.007)

Figure 4:Indication wise OH comparison.



- ❑ Morbidity adherent placenta increased (7% vs 23%.p,0.007) & rupture uterus decreased (61% vs 22%.p<0.001) significantly in 2nd decade of study timeline.

Figure 5:OH complication comparison.



- ❑ Although maternal mortality, DIC, AKI, Urinary track injuries remain static, Quality of critical care improved.(54% vs79%.p<0.001), wound infection and perinatal mortality significantly decreased (p,0.03)

Discussion & Conclusion

- Incidence of OH in our institute rose from 0.87% to 1.07% in the 2nd decade of our study timeline.
- In modern obstetrics better availability of uterotonics, blood components & surgical expertise has made conservative approach feasible in PPH with resultant decrease in OH rates in Primigravidas⁴.
- Uterine atony was the primary indication for OH in the 2nd decade of study timeline.
- Morbidity adherent placenta is now an increasing indication for OH due to increase in CS rates; at the same time uterine rupture has significantly decreased due to judicious use of oxytocics & decrease in VBAC. Similar findings observed in larger population based studies over 4 decades by Flood KM et al⁵.
- Traumatic PPH is also one of the indications for OH probably due to inadequate training in instrumental vaginal deliveries during residency programmes⁶.
- Maternal mortality remains static due to delay in seeking timely health care facilities & lack of a robust referral system.
- Primary CS rates should be decreased to prevent adherent placenta spectrum disorders.
- Good antenatal care and development of a robust referral system can decrease maternal mortality.
- Greater utilization of skill lab and simulators will go a long way in developing the skills of aspiring doctors in operative vaginal deliveries.

Take home messages

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Acknowledgment

I am thankful to Dr Nitin Raithatha and Dr Rumi Bhattacharjee for their guidance and motivation for this study.