

## **Synthetic Osmotic Dilators for Pre-Induction Cervical Ripening – an Evidence-Based Review**

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### **Objective and methods:**

- The article represents one of the earliest and most comprehensive review articles on synthetic osmotic dilator DILAPAN-S.
- The review evaluates over 10 clinical trials from 2015-2022.
- It summarizes the evolving role of DILAPAN-S in labour induction, especially overviewing its effectiveness, safety, patient satisfaction and staff time savings compared to other cervical ripening methods like balloon catheters and prostaglandins (PGE<sub>2</sub> and PGE<sub>1</sub>).

### **Key findings from the review:**

- **High vaginal delivery rates:** Studies show vaginal delivery rates with DILAPAN-S ranging from 61.6% to 81.7%, being comparable to other cervical ripening methods such as Foley balloon or prostaglandins (PGE<sub>2</sub>, PGE<sub>1</sub>).
- **Fewer complications:** No major complications associated with the use of DILAPAN-S, while only minor issues like vaginal bleeding during insertion were reported.
- **Lower risk of hyperstimulation:** Compared to prostaglandins, DILAPAN-S minimizes a risk of uterine hyperstimulation, contributing to its superior safety profile.
- **Superior patient satisfaction:** Notably, patient satisfaction during cervical ripening was significantly higher with DILAPAN-S compared to Foley balloon and prostaglandin-based methods (PG<sub>2</sub>, PG<sub>1</sub>).
- **Suitable for outpatient use:** Recent studies suggest that DILAPAN-S may be an ideal candidate for outpatient cervical ripening, offering convenience and efficacy while shortening the time from patient admission to active labour and reducing hospital stays.
- **VBAC candidate:** DILAPAN-S remains the only authorized cervical ripening method not contraindicated for patients with a previous cesarean section.
- **Staff workload and cost-effectiveness benefits:** Inpatient use of DILAPAN-S can reduce staff workload compared to dinoprostone vaginal insert. Outpatient use is associated with a reduction in hospital stay and hospital costs.

### **Key take away messages:**

- **DILAPAN-S is equally effective as Foley balloon catheter, the 10 mg PGE<sub>2</sub> vaginal insert and orally applied misoprostol in achieving vaginal delivery.**
- **DILAPAN-S has shown a better safety profile and higher patient's satisfaction compared to other cervical ripening agents.**
- **Current clinical evidence shows that potential concerns, such as failed insertion, expulsion, or infectious problems, are largely theoretical and don't represent real clinical issues.**
- **The review points to the need for an initial learning curve to handle the product properly, which can be overcome with adequate training.**