



# Ultrasound images of bulking agents used for stress urinary incontinence

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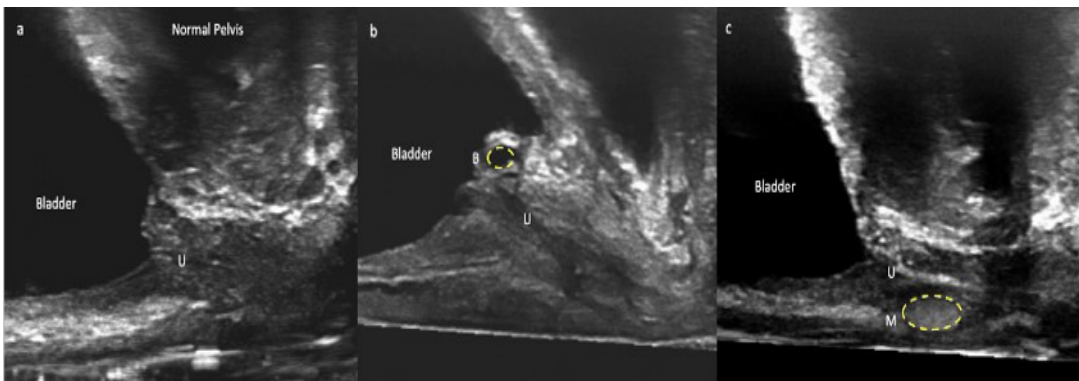
## Clinical image description

Urethral bulking agents are a recommended treatment option for women with uncomplicated Stress Urinary Incontinence (SUI). They are particularly used in women where other surgical procedures, such as a mid-urethral sling or colposuspension are not appropriate or acceptable to the woman [1]. There are many different bulking agents available. Bulkamid® is a non-particulate homogenous hydrogel made of 97.5% water and 2.5% polyacrylamide [2]. Macroplastique® is another bulking agent that contains silicone elastomer (cross linked polydimethylsiloxane) which is also non absorbable [3]. The bulking agent is injected into the tissue around the urethra via a cystoscope. The 'bulk' then allows the urethra to obstruct the flow of urine, stopping the leakage of urine [3].

Due to the different components of bulking agents, the appearance on ultrasound also varies. The echogenicity of the agent depends on the material it is made from. All images (Figure 1) were obtained using Three-Dimensional Endovaginal Ultrasound (3D EVUS) (type t8838; 6;-12 MHz 360° rotational probe) using the Flexfocus 500 ultrasound system (BK Medical, Herlev, Denmark). Compared to a normal pelvic ultrasound image (Figure 1a) the Bulkamid® (B) (Figure 1b) is seen as a hypoechoic oval-shaped area at the proximal end of the urethra (U). The Macroplastique® (M) (Figure 1c) is seen as a hyperechoic area under the urethra. 3D EVUS is a useful clinical way of determining the type of bulking agent used. It can also be used to determine the position of the injected agent, particularly for women who are still experiencing stress urinary incontinence symptoms or complications such as pain, since the bulking agent was inserted. Localization of the bulking agent sonographically would allow for more accurate placement of top-up injections.



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## References

1. Thüroff JW, Abrams P, Andersson K-E, Artibani W, Chapple CR, et al. EAU Guidelines on Urinary Incontinence. *European Urology*. 2011; 59: 387–400.
2. Bulkamid. [Online] 2020. Available from: <https://bulkamid.com/physicians/> [Accessed: 14th January 2020]
3. Laborie. Macroplastique Patient Brochure. [Online] Available from: [https://cdn2.hubspot.net/hubfs/414164/docs/Resource\\_Center/Macroplastique/Macroplastique\\_Patient\\_Brochure.pdf](https://cdn2.hubspot.net/hubfs/414164/docs/Resource_Center/Macroplastique/Macroplastique_Patient_Brochure.pdf) [Accessed: 14th January 2020].