

A convenient assembly for drug dilution

Sir,

Use of normal saline for dilution of drugs is a common practice, especially for paediatric patients and for inotropic medications. 5-mL and 10-mL normal saline (NS) ampoules are available in the market for this purpose. However, due to lack of availability of such NS ampoules at many centres, varied practices

have been observed. Few use a commercially available prefilled 'flush' syringe to dilute medications.^[1,2] More commonly, 100-mL or 500-mL NS bottles are used for dilution. Several methods are adopted to draw saline from these bottles. One of the common methods is introduction of wide-bore needle on the top of the container for repeated aspirations. The hub of the needle is closed by an intravenous cannula stopper after withdrawal of NS for subsequent use. Few others have incorrect practice of cutting near-completely the top portion of the bottle in a semi-circular manner using a surgical blade, which is replaced in between aspirations. Still, some others dedicate a saline bottle

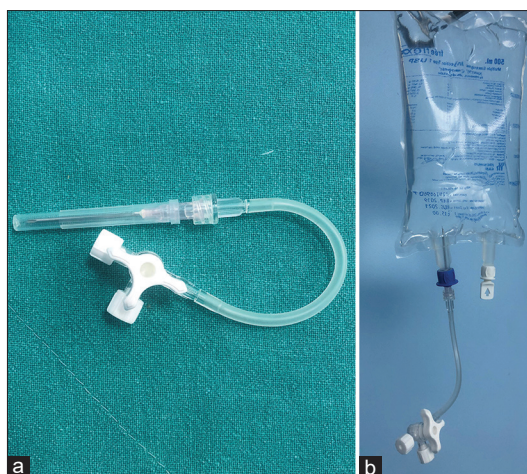


Figure 1: (a) Needle and 3-way assembly. (b) Self-collapsing fluid pouch with needle and 3-way assembly

for diluting drugs and prick it with the needle of a syringe each time they need fluid from it. These methods cannot guarantee sterility of saline and cannot prevent entrainment of atmospheric air into the bottle. Moreover, in these processes, the NS gets spilled occasionally. Furthermore, the use of flush syringes for dilution may be a potential source of drug error.^[3,4] In cardiac operation theatre and intensive care unit, we are using 500-mL self-collapsible NS pouches which are punctured at dedicated site of fluid withdrawal with an 18G needle attached with a 3-way adaptor [Figure 1a]. The 3-way adapter is turned on for aspiration after a sterile syringe is connected to it, closed before syringe disconnection and capped [Figure 1b]. This practice minimises entrainment of external air and chances of contamination of NS pouch. It also obviates the need of using multiple small NS ampoules for large dilutions that might be time-consuming, need extra workforce and are expensive too. It thus, eases the practice, especially when an anaesthetist is devoid of technical assistance and he/she has to be multitasking. Similar assembly may be used with 100-mL saline pouches. Although the method may not be at par with safe practices, it may be better than prevailing practices in resource-limited settings.^[5]

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Conflicts of interest

There are no conflicts of interest.

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