Auscultations

A novel method for the removal of ear cerumen

We describe the off-label use of a recreational device (the Super Soaker Max-D 5000) in the alleviation of a socially emergent ear condition.

A 45-year-old male complained of a profound reduction in his left ear acuity while staying at an island cottage in rural Ontario. His hearing loss was reducing his ability to hear his newborn son cry in the middle of the night, requiring his wife to carry out all late-night child care. As a result, correction of the problem was considered urgent.

The patient had been swimming multiple times a day for 6 days. He had had several ear infections as a child but was otherwise well. He admitted having used a Q-tip in his ear "once or twice" recently in the affected ear.

An otoscope being available, examination of the external ears was conducted. The nature of his problem was revealed as bilaterally impacted cement-like ear cerumen.

Neither a formal ear syringe, nor a syringe of any kind was available on the island. The day was very hot, and no one was particularly in the mood to boat to Honey Harbour and then drive 45 minutes to Midland, just on account of ear wax. One of the owners of the property was consulted in his capacity as a professional engineer and the owner of a superbly stocked tool shed (rivalling a mid-sized Canadian Tire). He was not able to offer any substitute contraption of his own but suggested we approach his 4-year-old grandson to see if we could use his pressured water cannon.

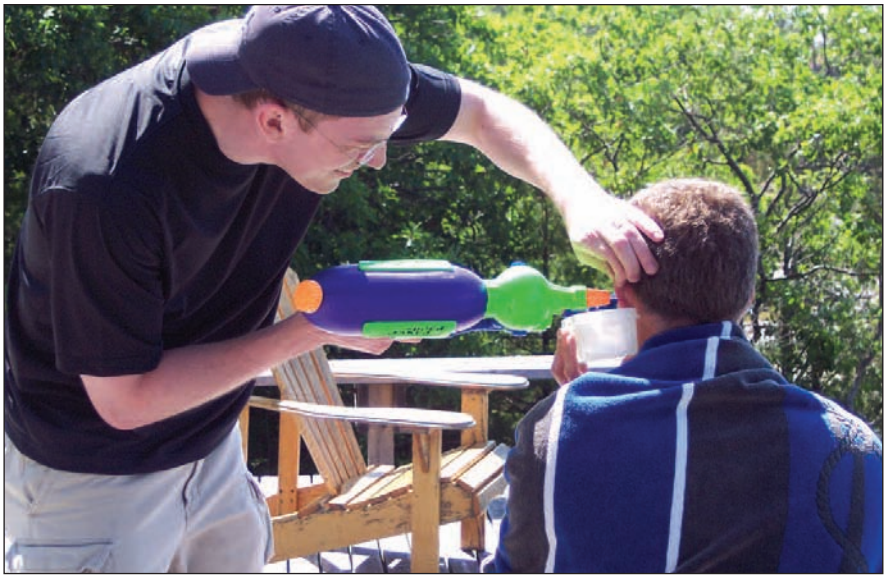

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Fig. 1: A novel application of the Super Soaker Max-D 5000.

D.K. (a family and emergency physician) assessed the utility of the Super Soaker Max-D 5000. He was surprised to note that it was able to deliver a superbly pressured narrow stream of water equivalent to, or perhaps exceeding, the quality of that achieved with standard ear-syringing instruments. The owner of the Super Soaker Max-D 5000 was sought out; after hearing an explanation of its intended application, he granted permission for its use.

Verbal consent (covering risks and benefits) was obtained from the patient. He then changed into swimming shorts, located himself on an ideal location on the deck and held a Tupperware container (product number 1611-16) to the side of his neck, in lieu of a kidney basin. The Super Soaker Max-D 5000 was filled with body-temperature water and then mildly pressurized using the blue hand-pump. The trigger was depressed, releasing a gentle, narrow jet of water, which was then aimed along the posterior wall of the ear canal (Fig. 1). After approximately 15 seconds, the jet was aimed along the anterior wall. This cycle was repeated (with occasional repressurizing) until the Super Soaker was empty.

Midway through the second load's stream, wax particles began to run out of the ear. Just after starting the third load, a large plug of wax burst forth from the patient's ear. The 3 generations of family members present took turns admiring (or recoiling from) the specimen. The patient exclaimed in joy, "I can hear again!"

The entire process was repeated for the right ear. Otoscopy was repeated, revealing both tympanic membranes to be free of cerumen, intact and in excellent condition.

The patient later reported a resumption in his nighttime ability to hear his infant son crying, which led to his being able to promptly jump out of bed and attend to his son's needs, excluding breast-feeding. This return to normal enhanced the state of their marital bliss on this island location.

Comments: The clinician operator of the device was impressed by the Super Soaker's ease of use for this procedure. Specifically, the ability to control a nar-

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row, mildly pressurized jet of water was considered excellent. As well, the device only had to be refilled once or twice before the cerumen was removed from each ear. This is in contrast to his experience of requiring up to 10 or more refills of standard ear-syringing equipment. Using the Super Soaker in standard practice could then lead to decreased overall time spent on this procedure, resulting in shorter waiting times for patients through increased physician efficiency.

A disadvantage to the Super Soaker was that the very useful blue hand-pump (used to pressurize the water) also prevented the device from getting close to the ear. This meant that the jet had to start approximately 5.0–7.5 cm from the patient, leading to significant backsplash toward the operator, and significant dousing of the patient (well in excess of that from the use of standard ear-syringing equipment). Any risk to the operator from this backsplash could be reduced in the future with the use of protective personal equipment, including a face-shield and gown.

We feel that prospective randomized trials are warranted to evaluate the utility of the Super Soaker Max-D 5000 in clinical settings.

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Disclaimer: Despite what bush-mad physicians may get up to on their private islands, *CMAJ* by no means endorses this particular application of the Super Soaker Max-Whatever. Do not try this at home.

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Competing interests: None of the authors holds stock in the Super Soaker Max-D 5000, water pistols or any devices of that kind.