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## Addendum: Safety Standards for *Gua sha* (press-stroking) and *Ba guan* (cupping)



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Available online 13 April 2014

### KEYWORDS

Gua sha;  
Guasha;  
Cao gio;  
Coining;  
Spoonng;  
Scraping;  
Baguan;  
Ba guan;  
Cupping;  
Traditional East Asian  
medicine;  
Chinese medicine;  
Integrative medicine;  
Safe practice;  
High level  
disinfection

**Summary** Our previous article *Safety Standards for Gua sha (press-stroking) and Ba guan (cupping)* discussed the risk of transfer of blood-borne pathogens with Gua sha and Ba guan, identified Gua sha and Ba guan ‘instrument criticality’ as semi-critical and offered recommendations for safe practice based on hospital disinfection standards. Based on the article’s feedback, we feel the need to clarify that Gua sha and Ba guan instruments, if intended for reuse, must undergo high level disinfection (HLD) or, in the case of ‘wet-cupping’, sterilization. We update our recommendations to be amenable to both private practice and education settings.

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### Background and discussion

In *Safety Standards for Gua sha (press-stroking) and Ba guan (cupping)*, published in the October issue of *Complementary Therapies in Medicine*, Nielsen et al.<sup>1</sup> discuss the risks of transfer of blood borne pathogens with Gua sha and Ba guan, identifying tools used for these techniques, per the Centers for Disease Control (CDC) standard, as semi-critical

instruments. We offered recommendations for safe practice based on Centers for Disease Control and Prevention (CDC) and the Occupational Safety & Health Administration (OSHA) standards.

In the past Gua sha and Ba guan instruments have been mistaken as non-critical instruments, not requiring high level disinfection (HLD) because they appear to contact ‘intact’ skin. However, the contact with these techniques is not incidental but involves enough repeated or sustained pressure as to (intentionally) cause extravasation of blood and fluids that may also seep or be let from the skin even if not immediately visible. A case of herpes infection given to a patient by acupuncture and Ba guan cupping supports the premise that there is risk of blood borne pathogen transfer.<sup>2</sup>

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Gua sha and Ba guan tools are, we maintain, categorically *critical* (for wet-cupping) and *semi-critical* (for Gua sha and dry cupping) *instruments* that require sterilization or high level disinfection (HLD) respectively before re-use.

We recommended a hospital surface disinfectant wipe: Super Sani-Cloth, Purple top ([www.pdipdi.com](http://www.pdipdi.com)). These chemical wipes are a hospital grade surface disinfectant *but are not recommended for use as an end disinfectant for semi-critical instruments*. They are appropriate for wiping surfaces in a clinical area for surface disinfection and may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or HLD.

HLD and/or sterilization require longer exposure to concentrated disinfection solutions. After reviewing standards and recommendations by the CDC,<sup>3</sup> OSHA,<sup>4</sup> Environmental Protection Agency (EPA)<sup>5</sup> and Federal Drug Administration (FDA)<sup>6</sup> we are updating our recommendations for HLD and sterilization.

### Set up: dedicated area for decontamination or sterilization

In addition to the procedures themselves, the CDC recommends there be a central processing area for disinfection and sterilization with distinct areas for the following steps<sup>7</sup>:

1. Receiving, cleaning and decontamination
2. Packaging
3. Sterilization, if needed
4. Storage

This division is designed to contain contaminated items to prevent contamination of the clean areas where packaging, sterilization, and storage of sterile items occurs allowing for quality control and safety. It should be separate from direct patient care areas.

Gua sha tools and Ba guan cups should be cleaned of blood, proteinaceous material and lubricants prior to HLD or sterilization<sup>1</sup> which can be accomplished with soap and water and then, if desired, wiping with Super Sani-Cloth. The cleaned instruments may then be disposed of, or if intended for re-use, rinsed of any soap or chemical debris and dried prior to immersion in the HLD/sterilization bath or autoclave sterilization.

### HLD/sterilization immersion for office/education setting

The FDA is the federal regulatory agency for safe and effective use of medical devices ([http://www.cdc.gov/HAI/prevent/sd\\_medicalDevices.html](http://www.cdc.gov/HAI/prevent/sd_medicalDevices.html)) and is responsible for regulation of chemical sterilants. The FDA lists immersion solutions for HLD or sterilization that can be safely used in a typical acupuncture office or education setting.<sup>6</sup> We recommend the 7.5% hydrogen peroxide solution and procedure because it does not require special ventilation and over time degrades to oxygen and water. At this concentration, direct contact with the product may cause eye irritation, or bleaching of the skin with prolonged contact so gloving is recommended as is use of eye protection.

**Table 1** Summary of recommended safety protocols for *Gua sha*.

1. For Gua sha a single-use disposable press-stroking device can be disposed of. Any metal or stainless steel Gua sha instrument designed for re-use should be washed with soap and water and disinfected with a high level disinfectant (HLD) for the prescribed period to achieve HLD. We recommend an FDA approved 7.5% hydrogen peroxide solution with a 30 min immersion.<sup>a</sup>
2. Decant lubricant into a disposable secondary container or use pump device for lubricant.
3. Personal protective equipment (PPE): glove both hands for the procedure.
4. Consider procedure sequence with respect to PPE needs.

<sup>a</sup> SPOROX® II Sterilizing & Disinfecting Solution.

SPOROX® II Sterilizing & Disinfecting Solution is an immersion solution that consists of 7.5% hydrogen peroxide ([http://www.sultangroup.com/DSP/IPCatalog\\_2012.pdf](http://www.sultangroup.com/DSP/IPCatalog_2012.pdf)) and is FDA-cleared for HLD at 30 min immersion at 20 °C (68 °F), and for sterilization at 6 h immersion at 20 °C (68 °F).<sup>6</sup> The longer immersion time is necessary for sterilization of instruments used for wet-cupping. SPOROX® II must be used undiluted and should be checked periodically with test vials (per product instructions) to ensure adequate concentration. Maximum reuse time for this solution is 21 days.<sup>8</sup>

### Gua sha and Ba guan procedure sequencing

As discussed in our previous article,<sup>1</sup> sequencing of Gua sha and Ba guan with other procedures must be considered with respect to the need for personal protective equipment (PPE). These are included in [Tables 1 and 2](#) that summarize the recommended safety protocols for *Gua sha* and *Ba guan*.

**Table 2** Summary of recommended safety protocols for *Ba guan*.

1. Cups used for wet cupping should be washed with soap and water and then sterilized before disposal or re-use. Sterilization requires immersion in 7.5% hydrogen peroxide solution<sup>a</sup> for the prescribed period of 6 h.
2. Cups used for dry cupping should be washed with soap and water and disinfected with a high level disinfection (HLD) solution, immersion in 7.5% hydrogen peroxide for the prescribed 30 min.
3. Personal protective equipment (PPE): wear gloves at all times.
4. When cups are obviously contaminated with blood or other potentially infectious material (OPIM), wear gloves and use a face shield (or mouth and eye protection) when releasing pressure, and when disposing of cup contents.
5. Consider procedure sequence with respect to PPE needs.

<sup>a</sup> SPOROX® II Sterilizing & Disinfecting Solution.

## Clarifications on reported practices

### Dishwasher cleaning

We have been asked if washing instruments in a dishwasher is sufficient cleaning for reuse. The answer is emphatically no. Dishwashers do not provide HLD or sterilization. Moreover, a dishwasher used for this purpose may harbor blood borne pathogens that can then be distributed to other articles like dishes and silverware. And merely washing instruments with soap and water does not qualify as HLD or sterilization (needed after wet cupping). Bone or horn instruments sold for Gua sha use cannot withstand repeated washing or decontamination and therefore are not suitable for use in a clinical practice.

### Soaking in dilutions of household bleach or common hydrogen peroxide

While it has been common practice by some to disinfect instruments by soaking in various dilutions of household bleach (sodium hypochlorite), the only chlorine products cleared by the FDA for HLD or sterilization are generated on-site by saline electrolysis which is not feasible in a private practice or education setting. Common hydrogen peroxide sold as an antiseptic at drug stores is only 3% hydrogen peroxide, which is insufficient for HLD or sterilization and therefore not adequate for disinfection of semi-critical or critical medical instruments. Chemicals used for HLD and sterilization must be cleared for this purpose by the FDA,<sup>6</sup> such as the 7.5% immersion solution SPOROX<sup>®</sup> II.

### Summary

Based on the response to our safety article for Gua sha and Ba guan, and to reports of common practice engaged by practitioners, we clarify that Gua sha and Ba guan instruments, if intended for reuse, must undergo high level disinfection (HLD) or, in the case of 'wet-cupping', sterilization. For this purpose we recommend immersion in a 7.5% hydrogen peroxide solution for 30 min for HLD and 6 h for sterilization (both at 20°C/68°F). We also put forward CDC recommendations of dedicating an area for decontamination or sterilization where contaminated items are clearly separated from those that have been treated.

Cleaning in a dishwasher or with common bleach or household hydrogen peroxide is emphatically insufficient. The recommendations and procedures made here are compliant with instrument criticality re-use standards and are amenable to both acupuncture private practice and education settings.

### Conflict of interest

The authors declare they have no conflict of interest.

### Acknowledgment

The authors would like to thank John Pirog, Professor at Northwestern Health Sciences University, Bloomington, MN for his contribution to this addendum.

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