

## **Gold Bead Implants – Medicine or Malpractice?**

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Acupuncture complications occur rarely but do happen.<sup>1 2</sup> Reviews of risks in humans point disdainfully to permanent needle embedding, stating, “Despite the fact that such Japanese techniques involving permanent needle retention are neither taught nor practiced in the West, they have contributed significantly to the unfavorable publicity about adverse events.”<sup>3</sup> Sadly, needle implantation risks fail to stop veterinary acupuncture groups from teaching and promoting its practice.<sup>4</sup>

### **Discouraged by Japanese Authorities**

Needle embedding involves permanently implanting tens, hundreds, or thousands of metal fragments.<sup>5 6</sup> In 1976, the Japanese Acupuncture and Moxibustion Association tried stopping their members from practicing it, though “[S]ome practitioners do not abide by the recommendation and are ignorant of the results of malpractice.” Simultaneously, veterinary acupuncturists in North America adopted the technique and renamed it “gold bead therapy”. In addition to needle fragments, veterinarians embed stainless steel “beads” and gold-plated magnets, often unsterile.<sup>7</sup>

### **How Does It Work?**

Supposedly, “[G]old beads emit a minute positive electrical charge that neutralizes the negative electrical charge of the joint, with the result being that the animal is free of pain and experiences no additional arthritic changes in the joint. Decalcification of the arthritic joint will be seen in some dogs when follow-up radiographs are taken 6 months to 1 year after implantation.”<sup>8 9 10</sup> More plausibly, if the treatment has any effect, it likely arises from the implantation process itself, wherein fragment clusters drive through large bore spinal needles, constituting heavy duty acupuncture.

### **What Does It Treat?**

Advocates praise gold bead implantation as “99% effective” for hip dysplasia in dogs under seven years old.<sup>11 12</sup> Its co-inventor regards gold bead therapy as the “treatment of choice for hip dysplasia, osteochondritis and osteochondritis dessicans of the shoulder, arthritis of the elbow and knee, spondylosis of the back, wobbler disease, and epileptic seizures...The gold bead implant will reverse the degenerative myelopathy in about 50% of the cases.”<sup>13</sup>

### **What Does the Evidence Reveal?**

Systematic studies fail to support gold bead therapy. Two double-blind evaluations in dogs with hip dysplasia showed no significant benefits.<sup>14 15</sup> Recently, a methodologically flawed study heralded by gold bead proponents as “proof” of its value compared needle implantation at “real” acupuncture points to no implants at “non-acupuncture” points, making it impossible to determine whether the gold beads made any difference.<sup>16</sup>

## Confusing the Picture

Ferromagnetic metallic objects embedded in tissue may compromise the quality of computerized scans such as CT and MRI, causing artifacts, obscuring diagnoses, and wasting resources.<sup>17 18 19 20</sup>

## Embedding Needles = Malpractice?

Authors from a 2007 report in *Chest* stated, "Migration of embedded acupuncture needles is associated with life-threatening consequences. The practice of embedding acupuncture needles is now considered malpractice and is discouraged by professional acupuncture associations."<sup>21</sup> Another author claimed that many more injuries appear in the Japanese-language literature.<sup>22</sup>

Implants have migrated to the spinal cord, peritoneal cavity, heart, stomach, liver, breast, brain, bladder, kidney, and colon.<sup>23 24 25 26 27 28 29 30</sup> Removing implants significantly traumatizes tissue.<sup>31</sup> Implants may activate mast cells, cause argyria, contact dermatitis, and gold-induced myelotoxicity.<sup>32 33 34</sup>

## Where to From Here?

Gold bead therapy offers no proven benefit over regular acupuncture and poses substantial potential for injury. The fact that implantation is regarded as malpractice in human medicine should come as a wake-up call to the veterinary profession.

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<sup>2</sup> MacPherson H. Fatal and adverse events from acupuncture: allegation, evidence, and the implications. *Journal of Alternative and Complementary Medicine*. 1999;5(1):47-56.

<sup>3</sup> MacPherson H. Fatal and adverse events from acupuncture: allegation, evidence, and the implications. *Journal of Alternative and Complementary Medicine*. 1999;5(1):47-56.

<sup>4</sup> Lectures on implants and gold bead therapy listed for the 2008 AAVA Annual Meeting - Nashville, Tennessee, March 7-9, 2008, obtained at [http://www.aava.org/php/aava\\_blog/?p=40](http://www.aava.org/php/aava_blog/?p=40) on July 29, 2007.

<sup>5</sup> Gerard PS. Images in Clinical Medicine: acupuncture-like fragments. *NEJM*. 1995;332(26):1792-1794.

<sup>6</sup> Imray TJ and Hiramatsu Y. Radiographic manifestations of Japanese acupuncture. *Radiology*. 1975;115:625-626.

<sup>7</sup> Durkes T. Gold bead implantation in small animals. *The Medical Acupuncture Web Page*. From the International Veterinary Acupuncture Society (IVAS) 25<sup>th</sup> Annual Congress. Obtained at <http://users.med.auth.gr/~karanik/english/articles/durkgold.html> on July 29, 2007.

<sup>8</sup> Durkes TE. Gold bead implants. *Problems in Veterinary Medicine*. 1992; 4(1):207-211.

<sup>9</sup> Durkes T. Gold bead implantation in small animals. *The Medical Acupuncture Web Page*. From the International Veterinary Acupuncture Society (IVAS) 25<sup>th</sup> Annual Congress. Obtained at <http://users.med.auth.gr/~karanik/english/articles/durkgold.html> on July 29, 2007.

<sup>10</sup> Eagle K. Acupuncture-needle fragments. *New England Journal of Medicine*. 1995; 332(5):304.

<sup>11</sup> Durkes TE. Gold bead implants. *Problems in Veterinary Medicine*. 1992; 4(1):207-211.

<sup>12</sup> Durkes TE. Chapter 25, Gold Bead Implants. In Schoen AM (ed.): *Veterinary Acupuncture – Ancient Art to Modern Medicine*. St. Louis: Mosby, Inc. 2001, pp. 303-305.

<sup>13</sup> Durkes T. Gold bead implantation in small animals. *The Medical Acupuncture Web Page*. From the International Veterinary Acupuncture Society (IVAS) 25<sup>th</sup> Annual Congress. Obtained at <http://users.med.auth.gr/~karanik/english/articles/durkgold.html> on July 29, 2007.

<sup>14</sup> Hielm-Bjorkman A et al. Double-blind evaluation of implants of gold wire at acupuncture points in the dog as a treatment for osteoarthritis induced by hip dysplasia. *The Veterinary Record*. 2001; 149:452-456.

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