

Webinar Q&A Report:

Animal Welfare in Surgery: Then and Now

Answers provided by Prof. René Remie

Does blunt dissection heal quicker than cuts made with scissors?

Cuts made with scalpels heal the best, followed by cuts made with scissors.

How reliable is the mouse grimace score? Are there any other parameters you recommend to precisely evaluate illness?

You must learn to work with the grimace scale. The difference between clinical and sub-clinical infections is vague. It is important to "know your animal", only then can you see the difference between a healthy animal and one that is ill. If you suspect that the animal has an infection, use the SAA (Serum Amyloid A) test. In addition to that, look at the fur, the eyes, and the posture of your animal. It is not easy with rodents as they are prey animals and tend to hide their illness for as long as possible.

Clearly strict aseptic technique is key, but I wondered what your thoughts are regarding prophylactic and post-operative antibiotics for implantation surgeries.

I believe in prophylactic antibiotic treatment when you implant something. This only needs to be once, and of course, before the surgery. Other surgeries without implants and performed under aseptic conditions do not require antibiotics unless they take longer than 3 hours.

What is your take on prophylactic antibiotics with sterile surgery?

My veterinarian worries about overusing antibiotics and creating antibiotic resistant bacterial colonies. We use Baytril 1.25%, and resistance against antibiotics is a problem. When given at the appropriate dose, and only once preoperatively, there will be a very low chance of problems.

Can you comment on using skin clips for wound closure in mice and rats?

They work great, give the opportunity for good wound healing, all with a low chance of post-procedural infections.

Is intradermal suturing a good option for surgery on rats?

Absolutely, it takes a bit longer, but the results are great. We use this technique in rats with 5-0 resorbable sutures and in mice with 7-0 resorbable sutures.

In your presentation you mention reducing “trash”. What do you mean by trash, besides dead tissue?

Everything you bring into the wound is considered “trash”. Bacteria, but certainly dead tissue. Reduce food for bacteria and they will have a hard time reproducing!

What is the effect of suture size? What size do you recommend for skin and for connective tissues?

The larger the suture diameter, the more foreign material will be in the wound. This should be avoided. For rats, I would suggest a maximum size of 4-0 for outside skin and internal connective tissue a max of 6-0. Our team goes one step smaller than that. For mice, I would suggest an outside max of 5-0, and an internal max of 7-0, and again we go one size smaller than those recommendations.

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