After five weeks, Barbie is going home after suffering one or more snake bites and battling life-threatening circumstances to finish recuperating thanks to the veterinary care she received at Oklahoma State University's Center for Veterinary Health Sciences. The 16-month-old filly is owned by Mrs. Janie Kaser of Morris, Okla.

“Red Bucks Muchacha “Barbie” is the daughter of Two Eyed Red Buck, a three-time world champion roping horse,” says Kaser. “We have a lot invested in her and with the care and nurturing and true devotion that Dr. Brosnahan gave her, she should recover fully once she is completely healed.”

Dr. Peggy Brosnahan, a 2nd year resident in Equine Internal Medicine, was assigned to Barbie's case along with 4th year veterinary students Ingrid Manhart and later Andrea Harl. Also working the case were Drs. Lyndi Gilliam, Equine Internal Medicine, Todd Holbrook, Equine Internal Medicine with a special interest in cardiology, and Heath Qualls, Resident in Equine Internal Medicine.

“It was ironic when I took the phone call from Dr. Mike Voss (OSU ’80) in Checotah to refer a horse that had been bitten by a snake because I was preparing to give a seminar on rattlesnake bites that very week,” recalls Dr. Gilliam.

Dr. Gilliam is conducting research on snake bites in horses. Her project focuses on defining the cardiac toxicity of rattlesnake venom in horses. While she partners with a Texas clinic that helps collect samples from horses with snake bites, she is always looking for more cases.

When Barbie arrived, her head and neck were swollen twice the size they normally would be. It is not uncommon for horses to get bitten on the nose because they are always grazing; however, Barbie got bitten on the head between the eye and the ear.

“This was quite an unusual place for a bite and we suspected that she was possibly laying down when she was bit.”

Based on the area of the state where Barbie came from, the bite had to have been a pigmy rattlesnake, a copperhead or a water moccasin. The attending veterinarians suspected a pigmy rattlesnake.

“Because of the severe swelling, Barbie was having trouble breathing,” says Dr. Brosnahan. “We performed an emergency tracheostomy to open up her airway.”

After three days at the Veterinary Hospital, a very large swelling appeared on the left side of Barbie's neck. It is undetermined if she was bitten in this area as well as on the head or if she had a reaction to injections that were given to her in the muscle before her arrival at OSU. Clostridial myositis is a known complication of intramuscular injections in the horse. According to Dr. Gilliam, she was predisposed to this because of the swelling in her neck.

"Rattlesnake venom itself causes extensive tissue necrosis and sloughing," explains Dr. Gilliam. "We will probably never know what caused the massive tissue loss in her neck, but it is all related to the snake bite."

Barbie was unable to eat or drink because of the massive tissue swelling of her lips and was quickly becoming dehydrated. The swelling in her neck was preventing the insertion of a catheter and that's when Dr. Holbrook came to the rescue. Ultrasonography was instrumental in identifying a vascular catheter access site.

"Dr. Holbrook gained access to Barbie's jugular vein and truly saved her life," says Dr. Gilliam.

Once Dr. Holbrook inserted the catheter, Barbie was able to receive intravenous liquids. Round the clock intensive care was provided by Dr. Brosnahan, veterinary student Harl and later Dr. Qualls. An abscess broke open on the left side of Barbie's neck, which spread making her neck from chest to mandible an open wound.

"Dr. Brosnahan called me every day," recalls Kaser. "I knew about the open wound and I asked her if she ever used maggot therapy. I worked as a medical social worker for years with a wound care nurse and knew it was a common treatment for hard-to-heal wounds."

"I contacted a veterinarian at Rood and Riddle Equine Hospital in Kentucky who has used maggot therapy to treat foot abscesses," says Dr. Brosnahan. "He had good success with it. I did some research and couldn't find any risks associated with the treatment. I didn't find any reason not to try it."

Medicinal maggots have three actions: 1) they clean wounds by dissolving the necrotic (dead), infected tissue; 2) they disinfect the wound by killing bacteria; and 3) they stimulate wound healing. Here in the United States there is one supplier of sterile, medical maggots—Monarch Labs located in Irvine, Calif.

"We contacted Monarch and they shipped the medical maggots to us," says Dr. Brosnahan. "They have not had many veterinarians use this type of therapy so they are very interested in veterinarian applications of maggots. Within 24 to 48 hours of the first application, there was significant improvement in the condition of Barbie's neck."

According to Dr. Brosnahan, the maggots are placed on the wound, left for 48 hours and then removed. A one-day wait occurs and then the maggots are re-applied. She did three rounds of maggot therapy. She states that she had never used maggot therapy before but believes they had a lot to do with Barbie's recovery rate.

“It makes me cry when I think about Dr. Brosnahan. She has done more than provide medical care. She never gave up; she even slept with Barbie, which was beyond the call of duty,” exclaims Kaser. “There are not enough words to express the appreciation and admiration we have for her (Dr. Brosnahan). She is a wonderful veterinarian and a humanitarian—a true credit to her profession.”

However, Barbie isn't out of the woods yet. Dr. Brosnahan feels she may need some skin grafts later in treatment and the chance of cardiac disease lingers.

“We have run tests on Barbie's heart and so far have not found lasting damage to her heart,” explains Dr. Gilliam. “That’s good news for Barbie.”

And it’s good news for owner Janie Kaser. Thanks to the treatment Barbie received at the Center for Veterinary Health Sciences, chances are good the horse will make a full recovery with no after effects. To Janie Kaser, that means Barbie can grow up to hopefully carry on her bloodline's tradition of being a champion roping horse.

“It's amazing that Barbie is still alive and we owe it all to OSU's Veterinary Hospital, the entire staff and all those who prayed for Barbie,” says Kaser, a very grateful client.

Click the following link to watch the News Report.
Daughter of Champion Horse Survives Snake Bite and Medical Complications