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Case Handling Bladder Stone on The Turtle (*Centrochelys sulcata*) at The Griya Animal Lestari Clinic, Semarang

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Abstract

Turtles are reptiles that are very easy to recognize because they have a distinctive body shape. A distinctive characteristic of turtles is the presence of a shell called a carapace on the dorsal part and a plastron on the ventral part. Turtle Centrochelys In their habitat, turtles eat green vegetables. Green vegetables contain quite high levels of calcium oxalate which causes this bladder stone in the turtle's bladder C. sulcata. The purpose of this writing is to find out how to handle it bladder stone on the turtle C. sulcata.The treatment method is carried out by surgery using assistance Rochester carmalt hemostatic forceps through the turtle's cloaca to remove the calculi. The results obtained were that the calculi were successfully removed with the formation of oxalate crystals, the therapy given was neprolith medication. Conclusion the turtle experienced bladder stone, The calculi were successfully removed with treatment Rochester carmalt hemostatic forceps.

Keywords: *Bladder stone, kura-kura, Rochester carmalt hemostatic forceps*

Introduction

Turtles are popular animals in Indonesia, especially turtles Sulcata (*Centrochelys sulcata*) which is most popular because it is an animal that is easy to care for, and the price is not too expensive (Raharjoet al., 2022). *C. sulcata* is the single largest species of turtle in the world and the largest in Africa (Rhodin et al., 2013). *C. sulcata* has a body weight of 45-91 kg and has reached 100 kg. The carapace length in males is 80 cm and in females 33-65 cm (Ardjima et al., 2020).

Land tortoise or tortoise *C. sulcata* is one of the land turtle species that is susceptible to infection bladder stone when maintenance management is not appropriate (Raharjo, 2021). Different environments, especially temperature and humidity, cause metabolism in the body not to work (Raharjoet al., 2022).

Bladder stone is a condition where uroliths or calculi form in the urinary tract. Bladder stone can cause blockages and injury to the urinary tract (Aristawatiet al., 2022). Clinical

manifestations at the event bladder stone are non-specific and vary greatly depending on the size, number and location (Grauer, 2015).

Clinical signs that appear in cases bladder stone on the turtle *C. sulcata* are anorexia, constipation, egg binding and dysuria. (Aristawatiet al., 2022). The discharge of white mucus from the cloaca and frequent wheezing is usually to remove retained urine (Sari, 2020).

Diagnosis bladder stone on the turtle *C. sulcata* is by palpation and X-ray. Imaging results from X-ray showed a thick white mass in the bladder (Raharjoet al., 2020). Surgical removal intervention will be the best way to remove calculi in the bladder (Raharjo et al., 2020).

CASE

Anamnesis andReporting Kura-kura *C. Sulcata* Esther's name is Pukli, male, 5 years old, weighing 7.4 kg, has symptoms of decreased activity. The owner said that Pukli had no appetite for approximately 5 days, had white mucus coming out of his cloaca, his eyes were watery and he often wheezed.

History and Physical Examination The results of the physical examination through inspection of the animal's condition are anorexia, in activity and oliguria. Physical examination of the turtle's carapace, extremity plastron, fingers and nails was normal.

Fig 1 Turtle *C. sulcata* (personal documentation).

Diagnosis The results of the X-ray examination showed radiopaque crystals or stones in the bladder of the case turtle. On radiographic or X-ray examination with the VD position or ventral dorsal.

Fig 2 Radiographic view with position ventral dorsal (personal documentation).

Meterials and Methods

Writing Plan In preparing the final assignment for this veterinary professional education program, a descriptive scientific paper writing plan was used.

Location and Time Location of the case incident bladder stone on land turtles Sulcata at the Griya Satwa Lestari Clinic, Semarang city on July 9 2023. Treatment and treatment will be carried out on July 10 2023.

Tools and materials The tools used are rochester carmalt hemostatic forceps, spoit 10 cc, anatomical tweezers and instrument tray. Meanwhile, the materials used gloves sterile and gauze.

Activity Procedures The treatment carried out is:

1. History and signalement

Charging reporting and anamnesis is carried out by gathering information about the turtle's condition *C. sulcata* towards turtle owners.

2. Physical examination of the turtle *C. sulcata*

To determine the presence of abnormalities in a body system or organ, a physical examination is carried out.

3. Determination of diagnosis

Determining the diagnosis is based on the results of inspection, palpation and X-ray to determine the condition of the turtle *C. sulcata*.

4. Determination based on diagnosis

Kura-kura *C. Sulcata* experience bladder stone, then surgery is carried out, namely handling the removal of stones or calculi with assistance rochester carmalt hemostatic forceps.

5. Administering medication and therapy by immersion.

Data analysis The data analysis used is descriptive analysis. The descriptive data presented comes from patient status data in the form of anamnesis, reporting, physical examination, diagnosis, as well as treatment and treatment carried out.

Handling Handling begins with soaking the turtle *C. sulcata* with lukewarm water for ± 15 minutes as relaxation. Then lay it in the middle position or dorsal recumbency. The cloaca area is given lubricant in the form of

Results and Discussion

Glycerin and in flushing with NaCl solution before removing the calculi vesica urinarya. The calculi that are in vesica urinaria all removed slowly using Rochester carmalt hemostatic forceps and rinsed with physiological solution. After the calculi were removed, the case turtle managed to excrete urine and feces, which previously could not be excreted for ± 5 days.

Fig 3 Operation procedure (personal documentation)

The case turtle underwent another radiographic examination to confirm the calculi vesica urinaria has been completely removed. Radiographs showed calculi onvesica urinarya has been completely removed. Turtle *C. sulcata* hospitalized for 3 days to monitor condition. The case turtles were given medication nephrolith once, one capsule for 3 days with control again after a few days after treatment to carry out another radiological examination. Owners are also advised to always provide sufficient drinking water and improve the

nutrition of the turtle's feed to prevent cases bladder stone return.

Bladder stone This is a case that is quite often found in reptiles, especially turtles *C. sulcata.* Bladder stone often does not show specific clinical symptoms and is usually discovered accidentally during palpation and/or radiology examination (Raharjo, 2021). In this case the diagnosis bladder stone confirmed by radiological examination or X-ray if deep uroliths are found vesica urinarya (Keller et al., 2015).

Handling carried out for lifting bladder stone is by the act of operation using the help of tools rochester carmalt hemostatic forceps by taking stones from the cloaca, and flushing using physiological fluids in the form of NaCl infusion fluid. According to Suharjo (2021), urolith evacuation must be carried out carefully and follow flushing vesica urinarya to clean vesica from the possibility of urolith fragments.

Giving warm water is the initial action before removing the calculi, apart from being a relaxation aimed at preventing hypothermia. According to Perpinan (2018), turtles are reptiles which are classified as poikiloter animals, which means their body temperature depends on the environmental temperature and each species has an optimal average temperature that supports all organ systems to work effectively.

After the calculi are removed, they are brownish white, have a rough surface and irregular shape accompanied by grains of sand. According to Priyono and Exsa (2019), calcium oxalate stones are characterized by a brown, irregular color and a rough stone surface. This indicates that the cause bladder stone In cases of turtles, this can be caused by the food given in the form of kale and spinach which are rich in calcium oxalate.

Conclusion

Kura-kura *C. sulcata* named Pukly experienced bladder stone. Diagnosis in this case with supporting diagnosis was carried out by X-ray, showing a buildup of calculi in the bladder. Treatment is carried out with surgery Rochester carmalt hemostatic forceps to remove the calculi onvesica urinaria through the turtle's cloaca *C. Sulcata*, therapy and treatment with Nephrolit.

Conflict of Interest

We certify that there is no conflict of interest with any financial, personal, or other relationships with other people or organization related to the material discussed in the manuscript.

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