

JUST LIKE ANY OTHER LITTLE BEAGLE



A NOTE TO PARENTS AND GUARDIANS OF CHILDREN WITH HYDROCEPHALUS

This coloring book is printed by Integra as a service to the medical community. It was designed to help children with hydrocephalus (and their parents, brothers and sisters) better understand this condition. This coloring book was designed to be read along with an adult who has first reviewed basic information on hydrocephalus.

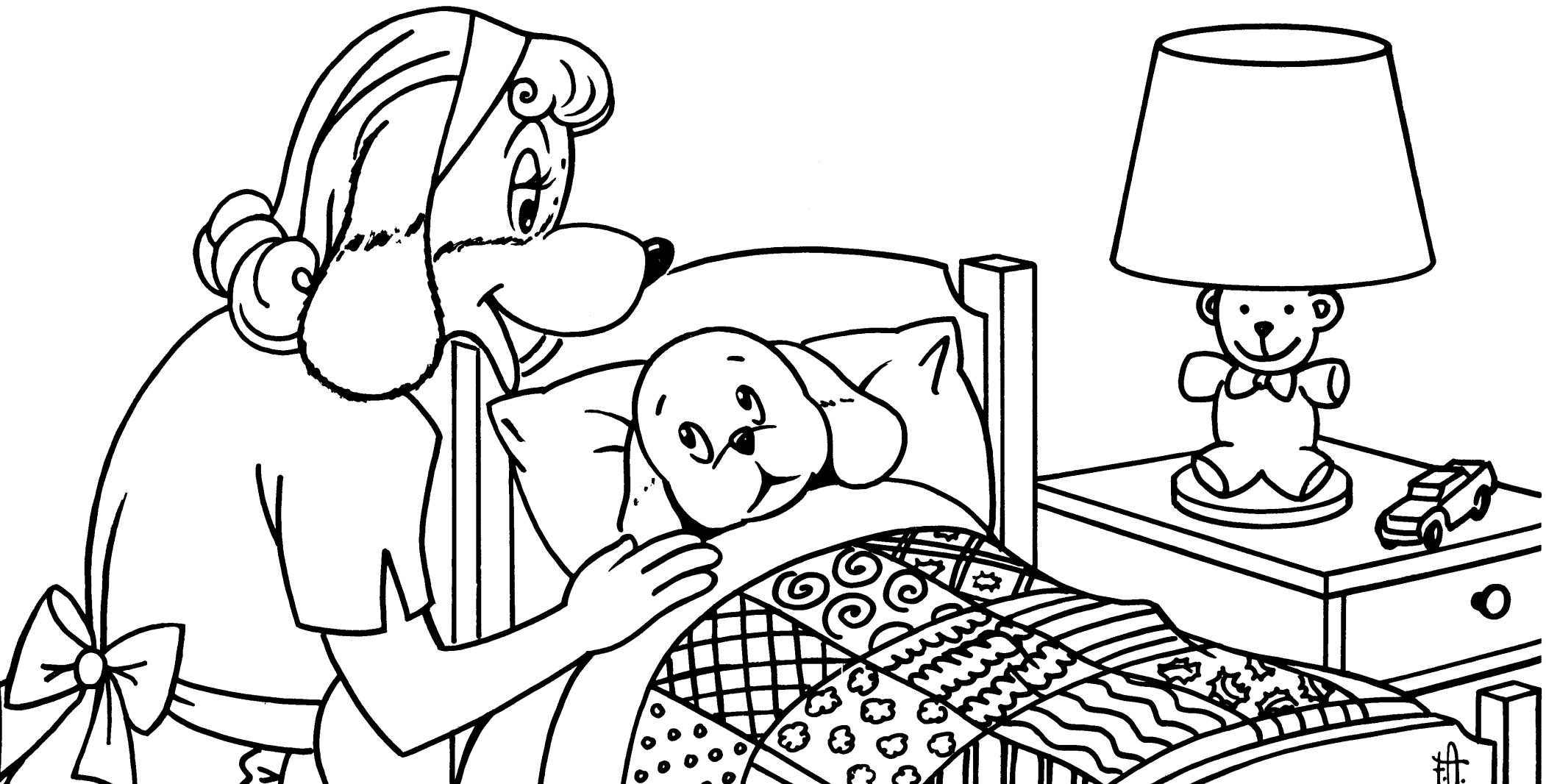
Integra appreciates the efforts of the neurosurgeons, nurses and educators who reviewed the material prior to publication. Their suggestions, comments and criticism are gratefully acknowledged. We have tried to incorporate as many of their suggestions as possible. Comments and suggestions for improving this coloring book will be greatly appreciated.

WHAT IS HYDROCEPHALUS AND HOW IS IT TREATED ?

« We'll be going to Dr. Owl tomorrow for your check-up » said Mama Beagle as she helped Barney get ready for bed.

« Doctor ? » said Barney Beagle. « Again ? I'm not sick. I feel fine ».

Mama Beagle said, « There's nothing to worry about. It's just your regular visit ».

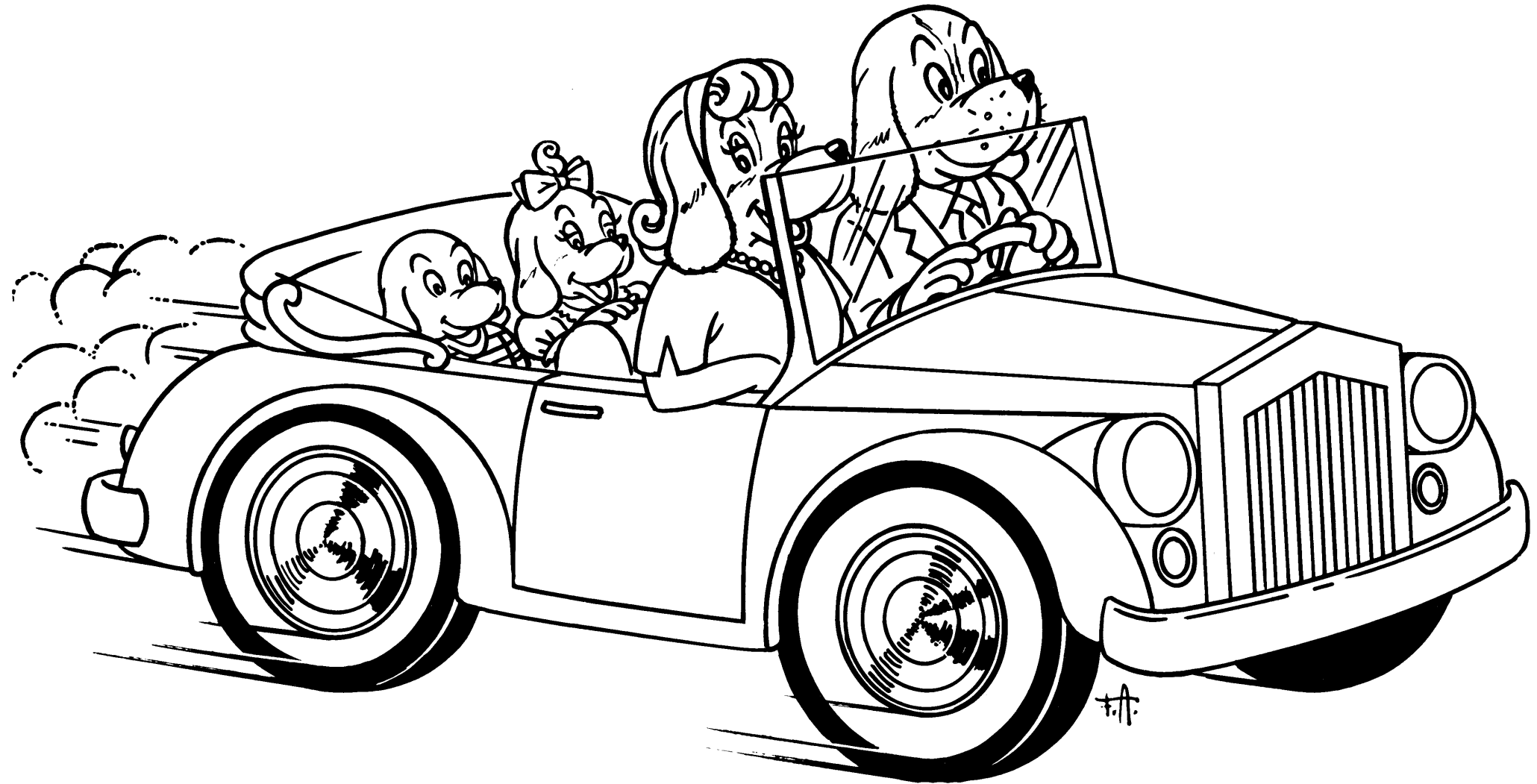


The next morning after breakfast, the entire family climbed into the car and were on their way to the doctor.

« Be sure to fasten your seat belts », said Mama.

« Do you get check-ups, Mama ? » asked Barbara Beagle, Barney's sister.

« Yes, I do », answered Mama. « However, Barney's check-ups are special ».



« When Barney was born, he was just like any other little puppy, except...
...He had a problem ».

« Doctors found that in Barney's brain there was a condition called hydrocephalus
(hi-dro-sef-a-lus) » said Mama.



« The brain is the part of your body that helps you to think and move and feel. It runs the other parts of your body », explained Papa.

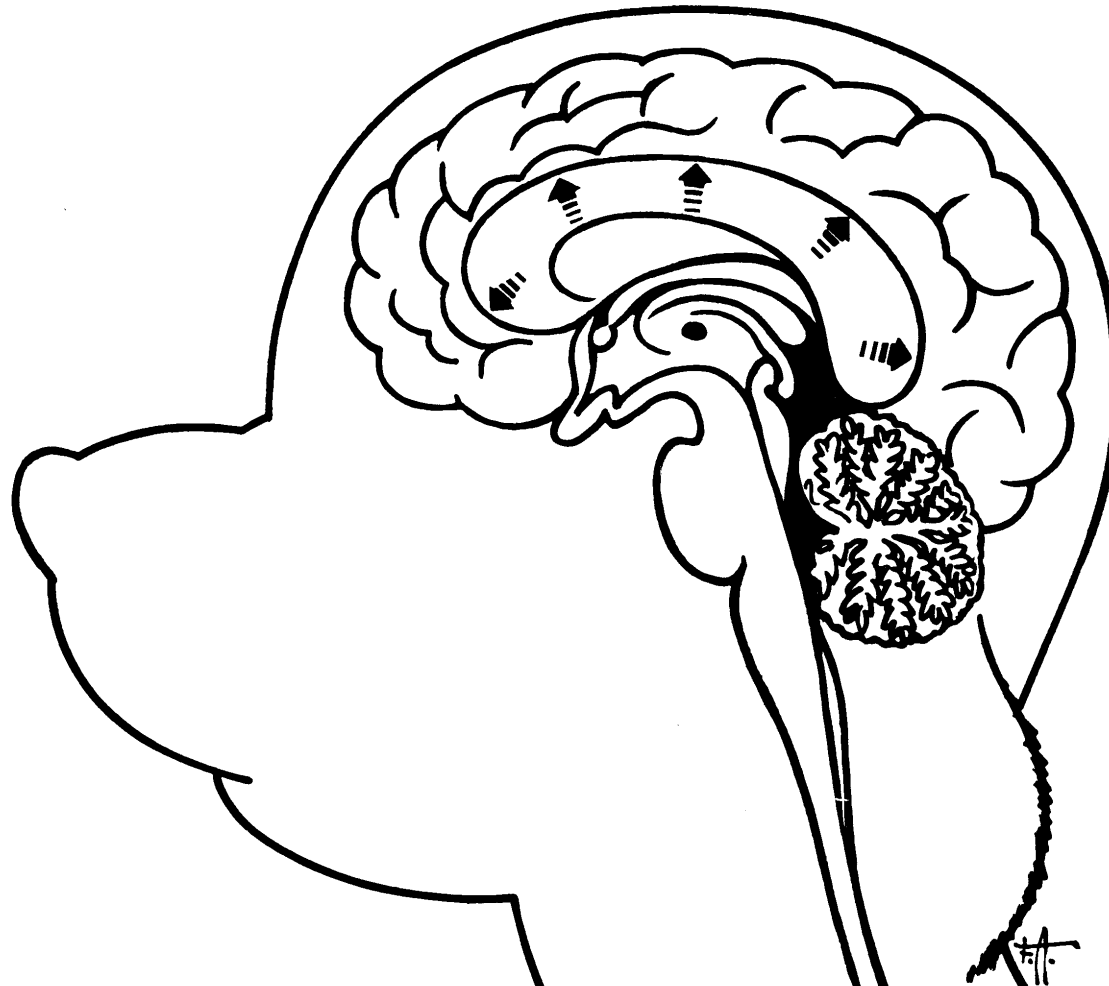
« Everyone's brain makes a water-like special fluid every day....

... not too much !

... not too little !

... just the right amount ! ».

« The brain keeps making this fluid all the time. Extra fluid goes to other parts of the body where it is used up. Normally, the amount that is made new each day is the amount that is drained away each day ».



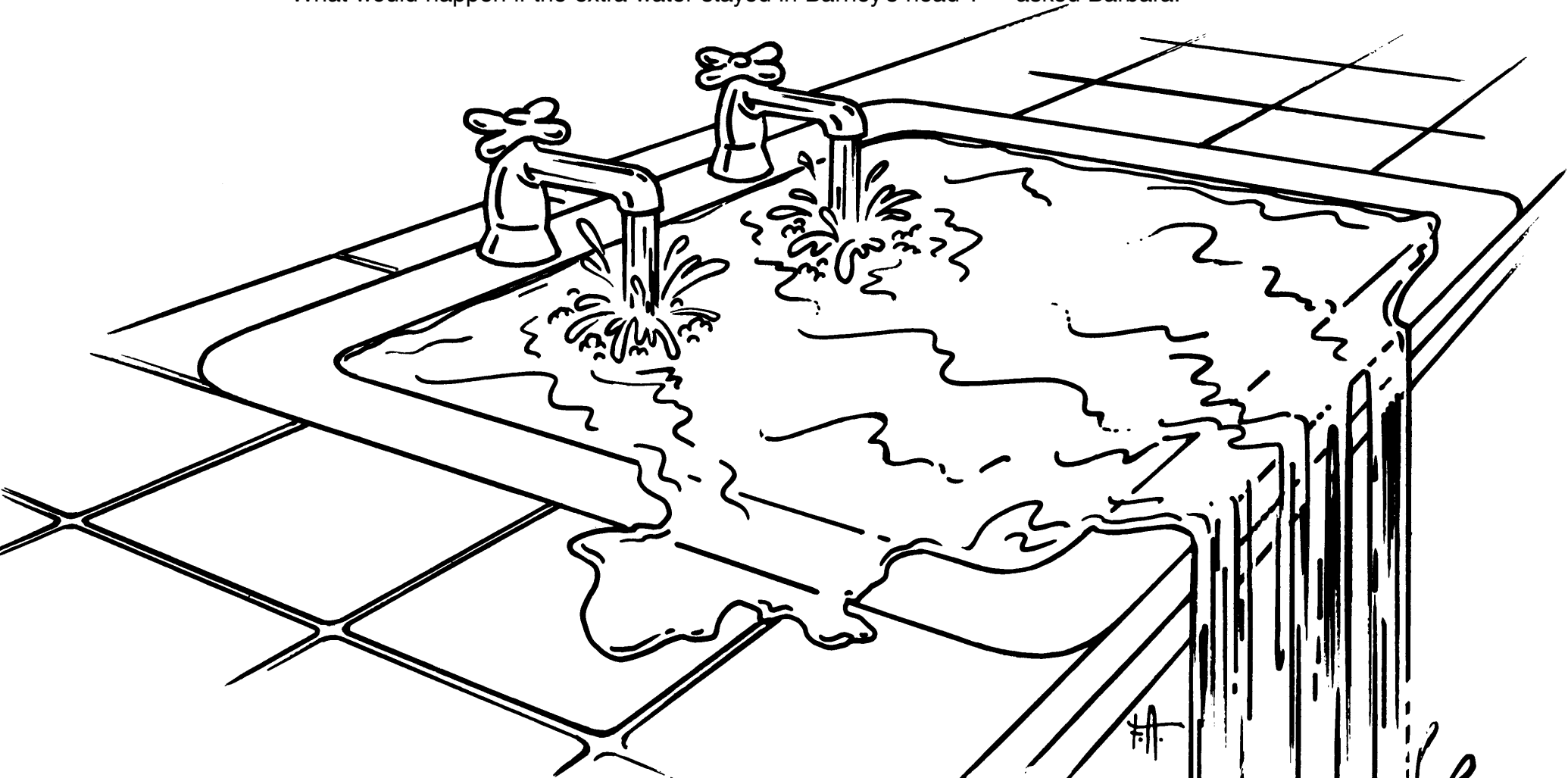
« Barney's brain did not drain enough « special fluid » . This extra water would push against Barney's brain if the problem had not been corrected... », said Mama.

Barbara seemed puzzled so Papa gave an example:

« This is similar to everyday happenings around the house:

When filling a sink, if more water flows in than drains out, the extra water spills over the edge. But inside the skull (the bony part of the head) there is no other « edge » for the extra water to spill over. So, it would stay in the head ».

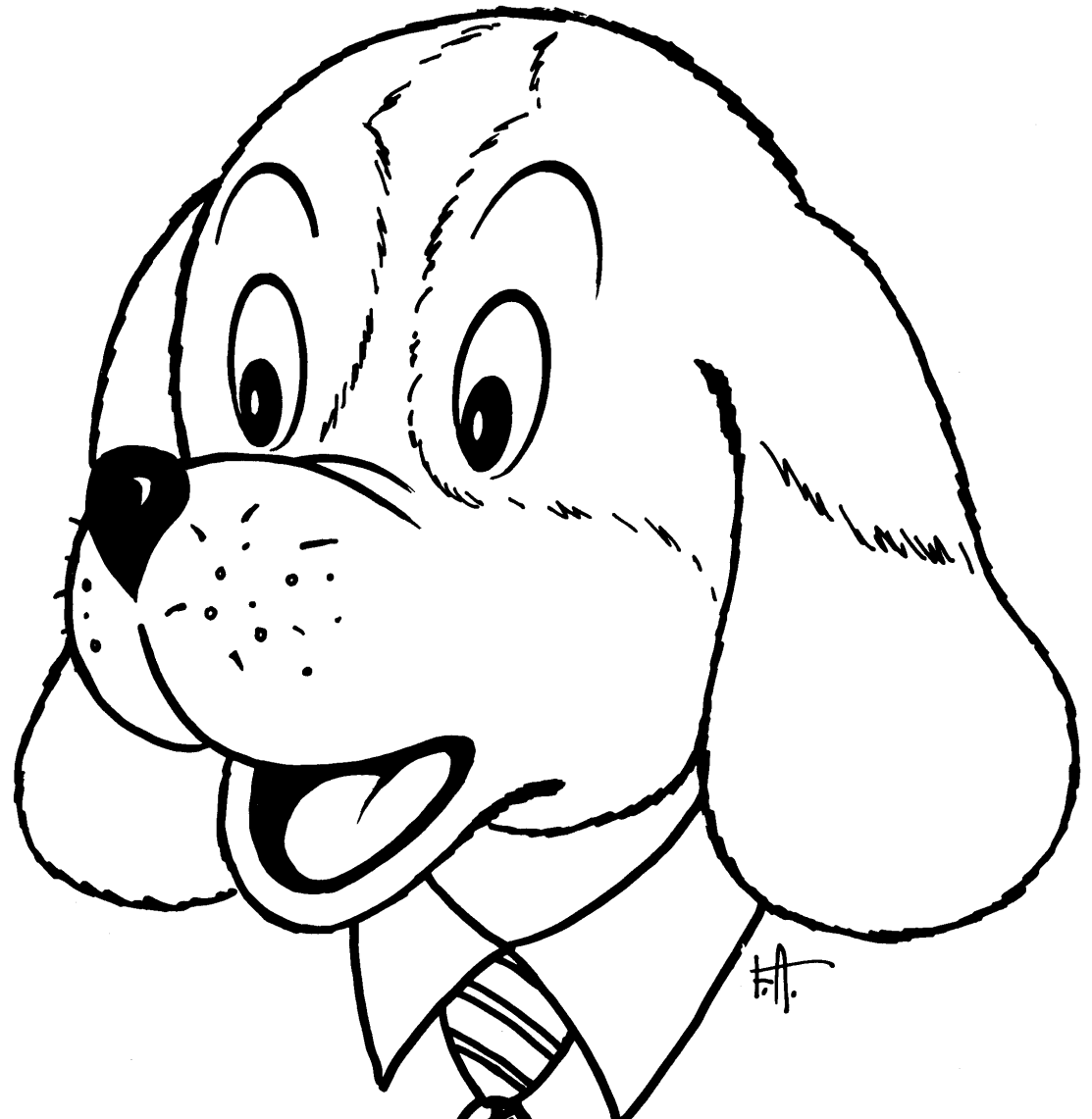
« What would happen if the extra water stayed in Barney's head ? « asked Barbara.



« The extra fluid would push against the brain and could cause:

- ... headaches
- ... vomiting
- ... learning problems
- ... enlarged head.

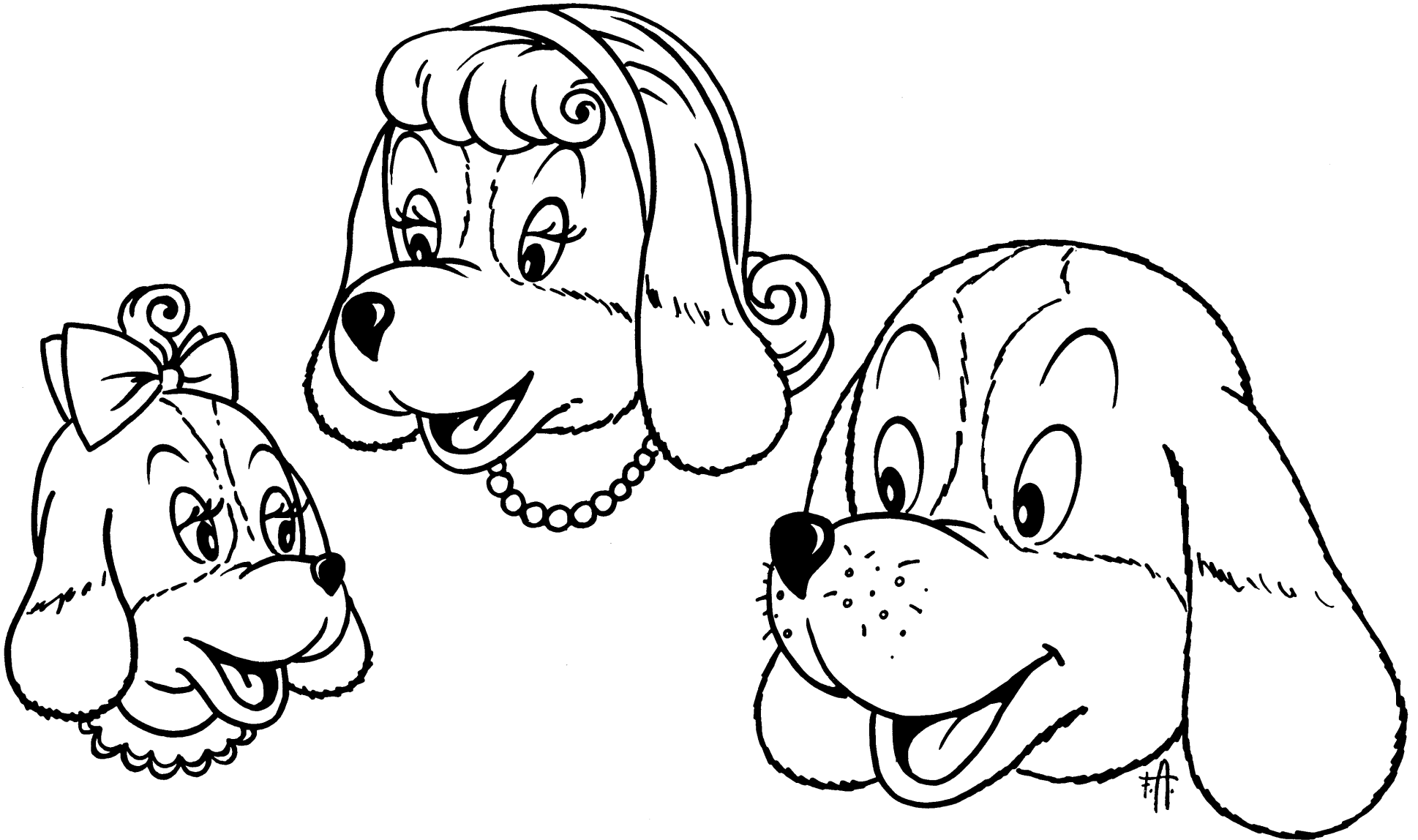
Of course, these symptoms may have other causes too, but doctors showed that Barney had hydrocephalus » explained Papa.



« Did Barney do something wrong to cause the problem ? » asked Barbara.

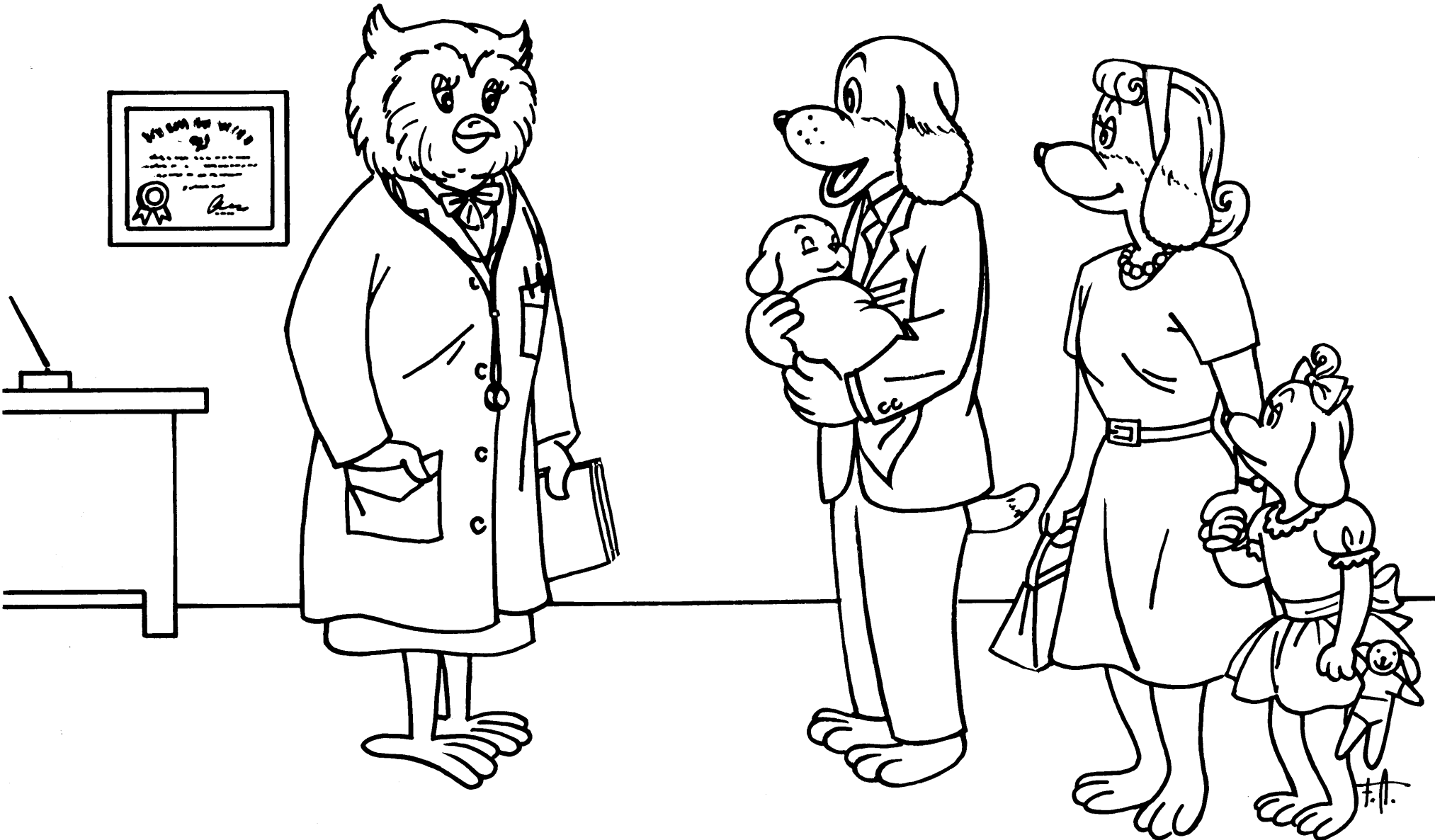
« Oh, no! » said Mama, « He was born with the condition ».

« Others may develop hydrocephalus after an accident or infection or as the result of a tumor (a growth that is not formal). Fortunately, doctors can do things to help puppies like Barney », said Papa.



When Barney was born, his parents loved him very much. They wanted Barney to be happy and healthy like his sister Barbara. So....

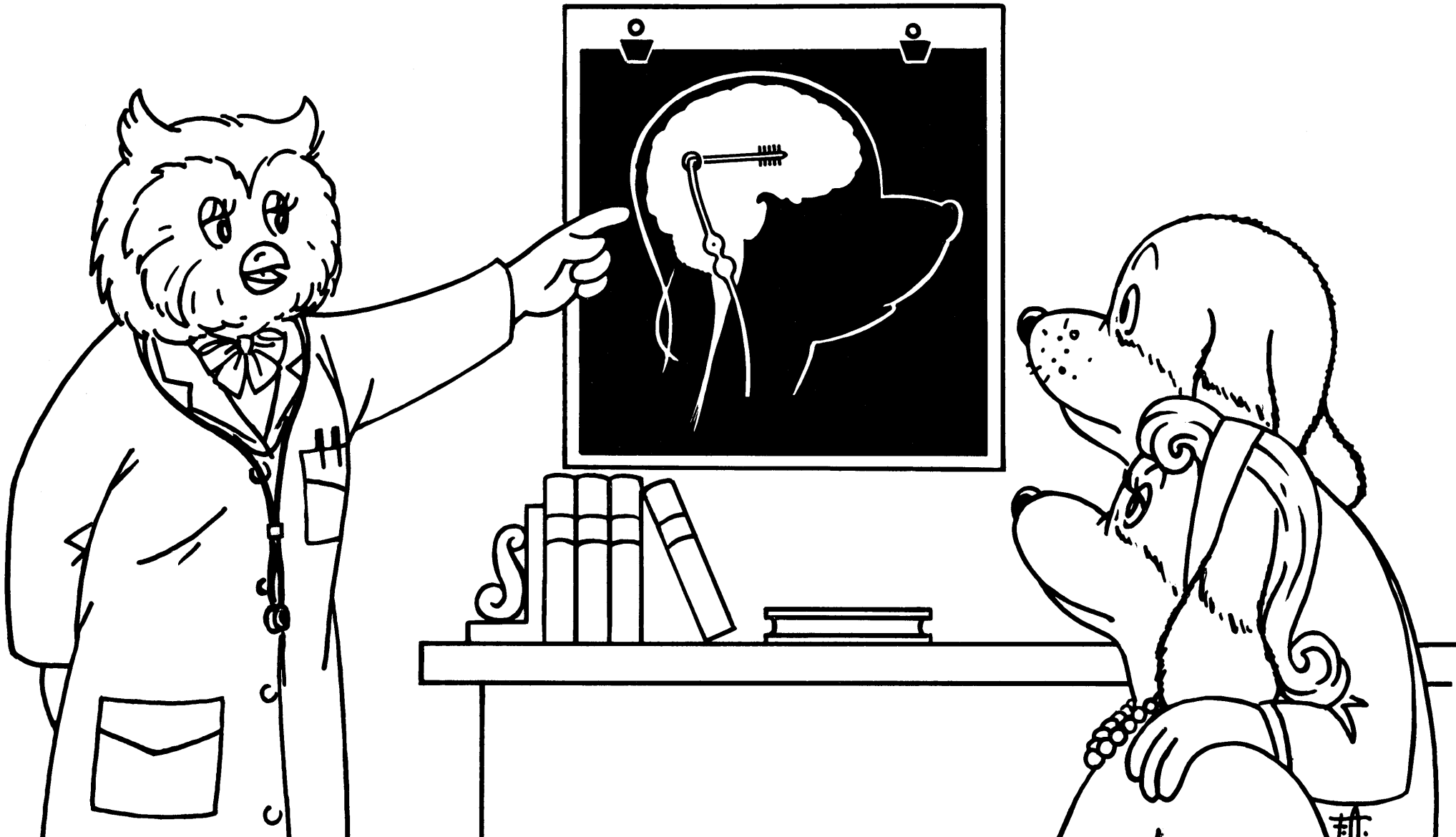
... they asked Dr. Olga Owl to see Barney. Dr. Owl is a neurosurgeon (that's a doctor who treats people who have problems of the brain and nerves).



The doctor told Barney's parents...
« I can help your son. »

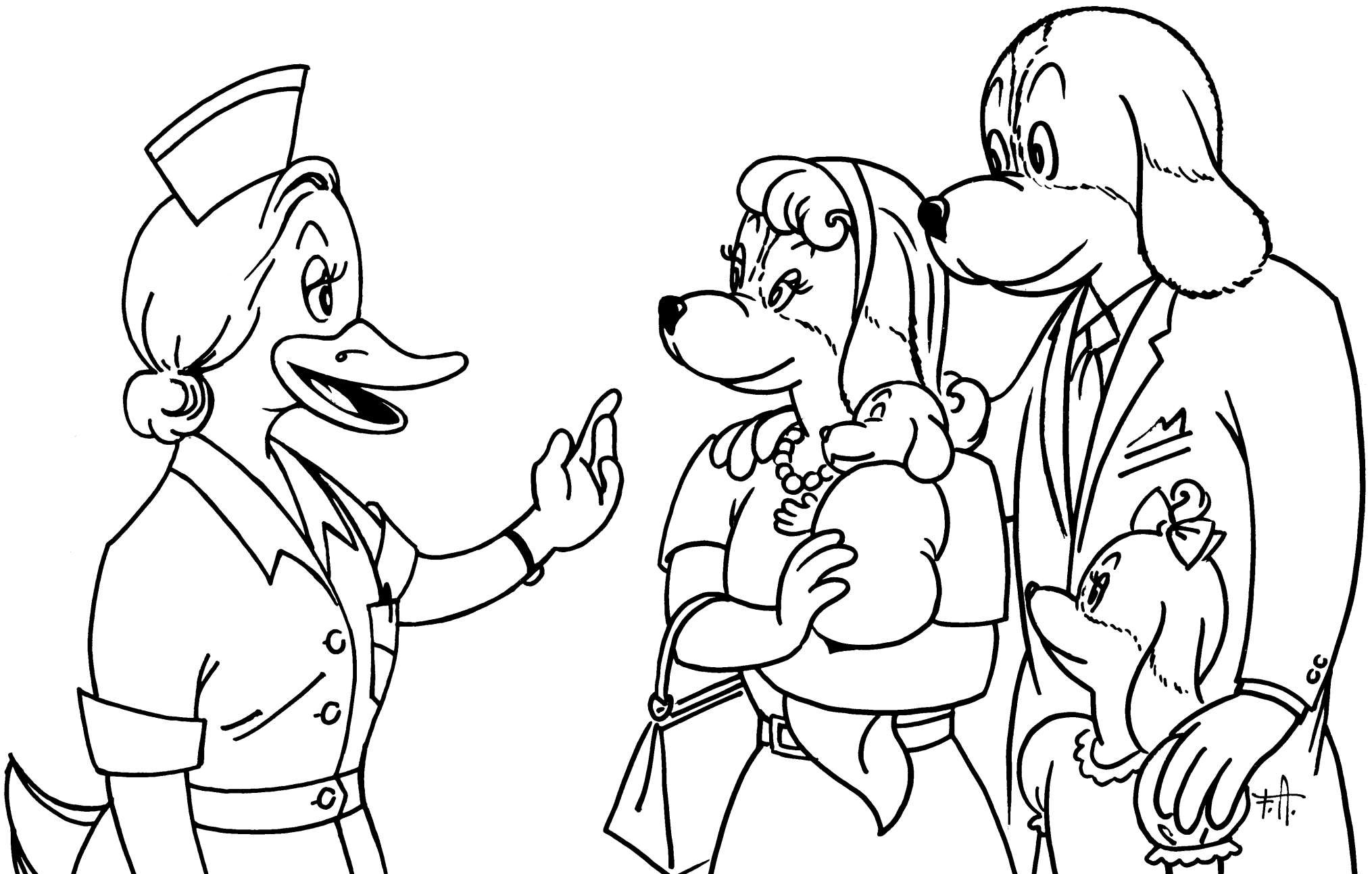
She had taken care of many other cases like Barney's.

« In all cases, the treatment is the same: a shunt (or hydrocephalus valve) system is implanted.
A shunt is a long, thin tube that looks like a straw » explained Dr. Owl.



The doctor asked Ms. Deborah Duck, a nurse at the hospital, to explain more about what would happen and to answer any additional questions.

« The procedure is called a shunt operation », said Ms. Duck.

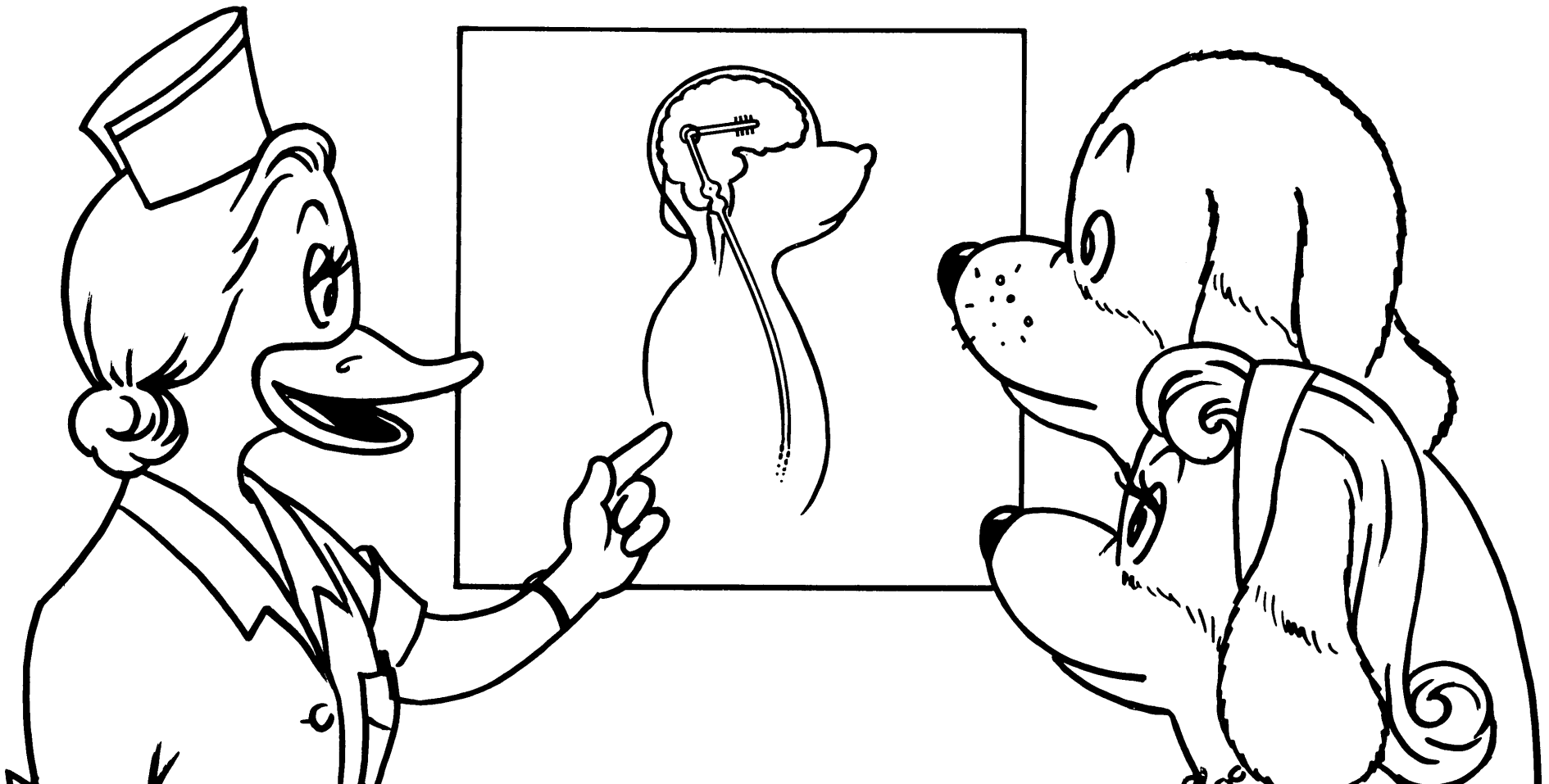


« Here's what will happen:...

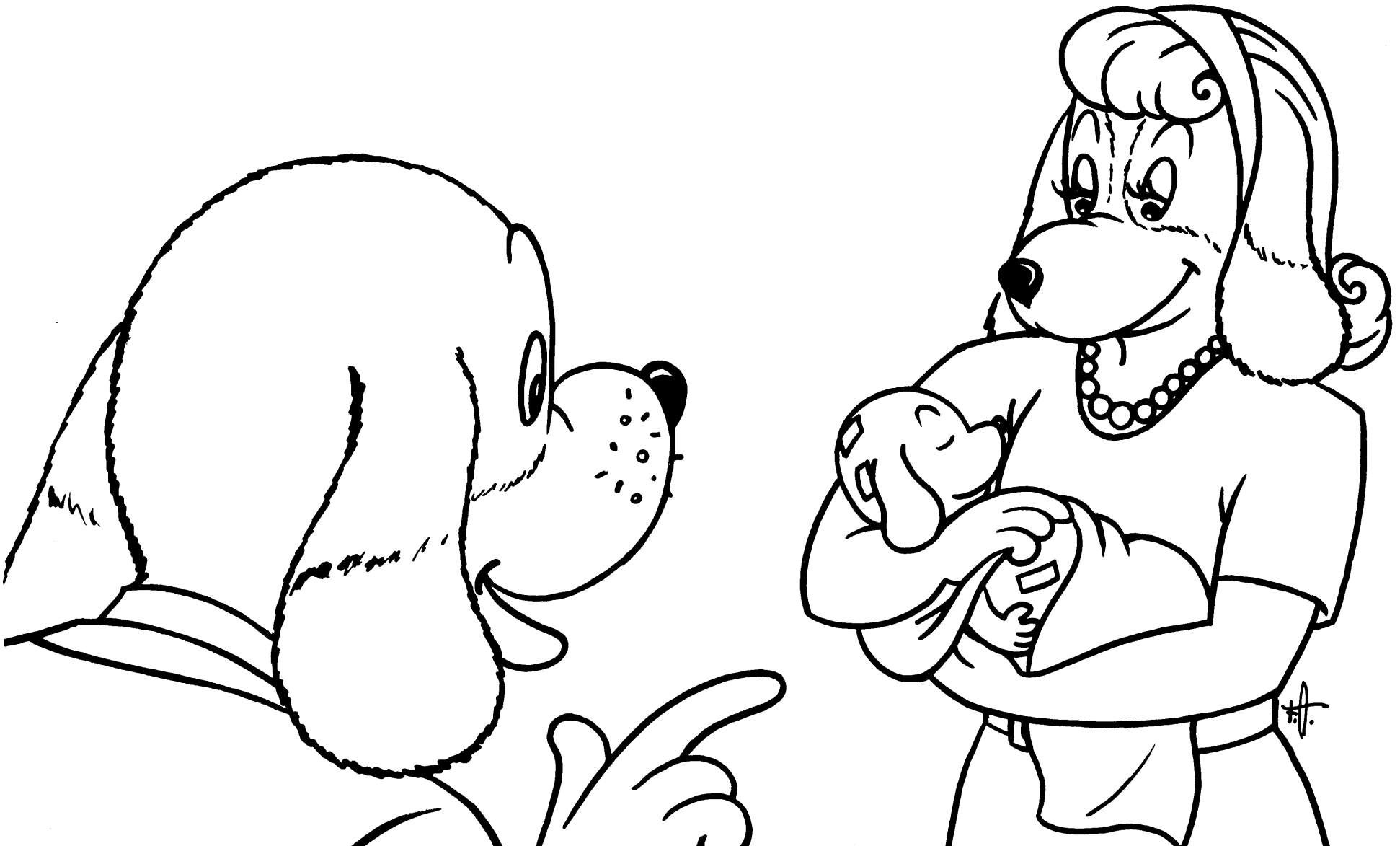
... A doctor or nurse will help Barney go to sleep so that it won't hurt. This is not ordinary sleep. It is a special type of sleep.

While asleep, a tiny hole is made in the skull. A path, or tunnel, is made under the skin from the head to the area near the tummy or heart. One end of the tube is placed in the water-filled pocket (ventricle) in the center of the brain. The tube is passed through the brain in a region known as the « silent area ». The other end is placed in the tummy or heart.

The extra water flows through the tube. It flows away from the head to the tummy or heart. A valve between the two ends of the tube makes sure that just the right amount of fluid is drained. »



« Two or maybe 3 tiny openings are made in the skin. When the doctor has finished, the tiny openings are closed with a special kind of thread, then they are covered with bandages. In a very short time, the tiny openings heal. Since the entire system is placed under the skin, it is hard to tell that it is there. Barney will probably be able to participate in regular activities. »

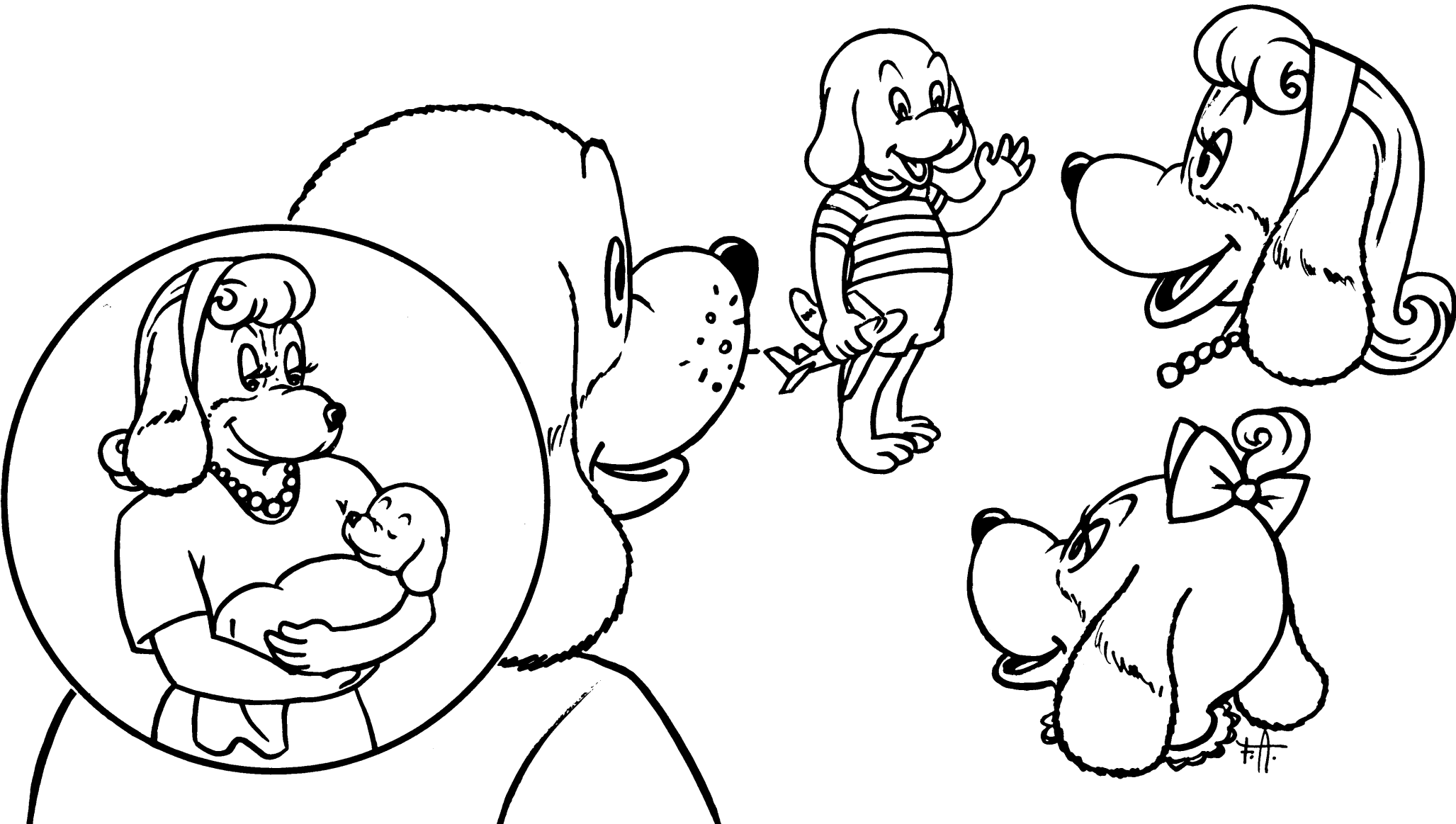


« A few days later, the procedure was done and Barney did very well », Mama remembered.

« About a week later, Barney was ready to leave the hospital with Dad and me », said Mama.

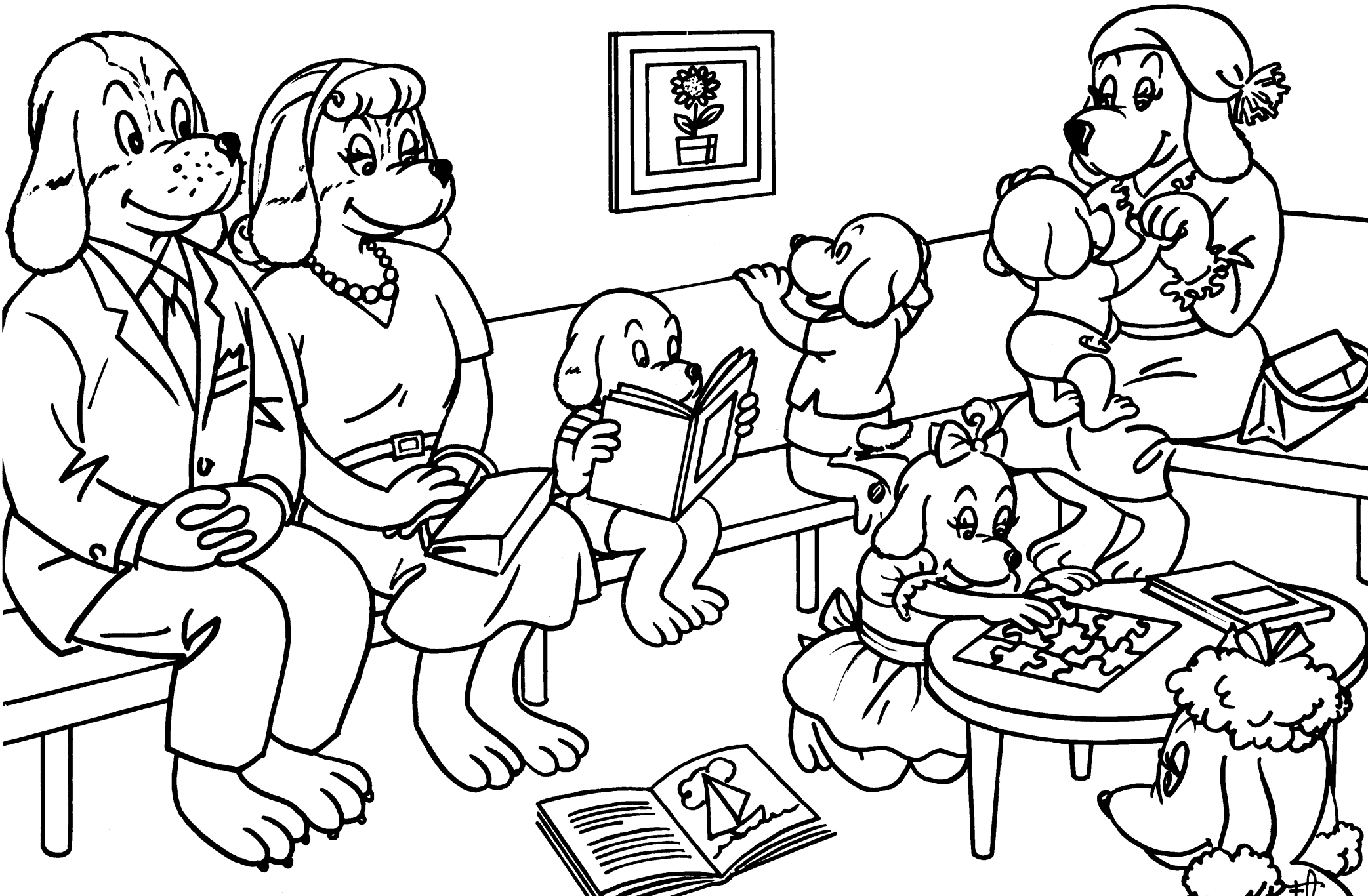
« You came with us, Barbara, when we took Barney home », said Mama. « Do you remember ? »

« Yes, » replied Barbara. « I remember how tiny Barney was and look how big he's grown. »



A VISIT TO THE DOCTOR

The doctor's waiting room was a very busy place. There were books and magazines to look at and puzzles to do. Barbara started working on a puzzle. Other children were coming in. Children of all ages were there to see Dr. Owl.



« Next ! » called Dr. Owl. « I think you're next, Barney Beagle. »

« How are you, Dr. Owl ? I'm fine ! » said Barney.

« I'm fine, too. It's good to see you Barney » said Dr. Owl.

« Please join us, Mrs. Beagle. There are some questions I would like you to answer. »

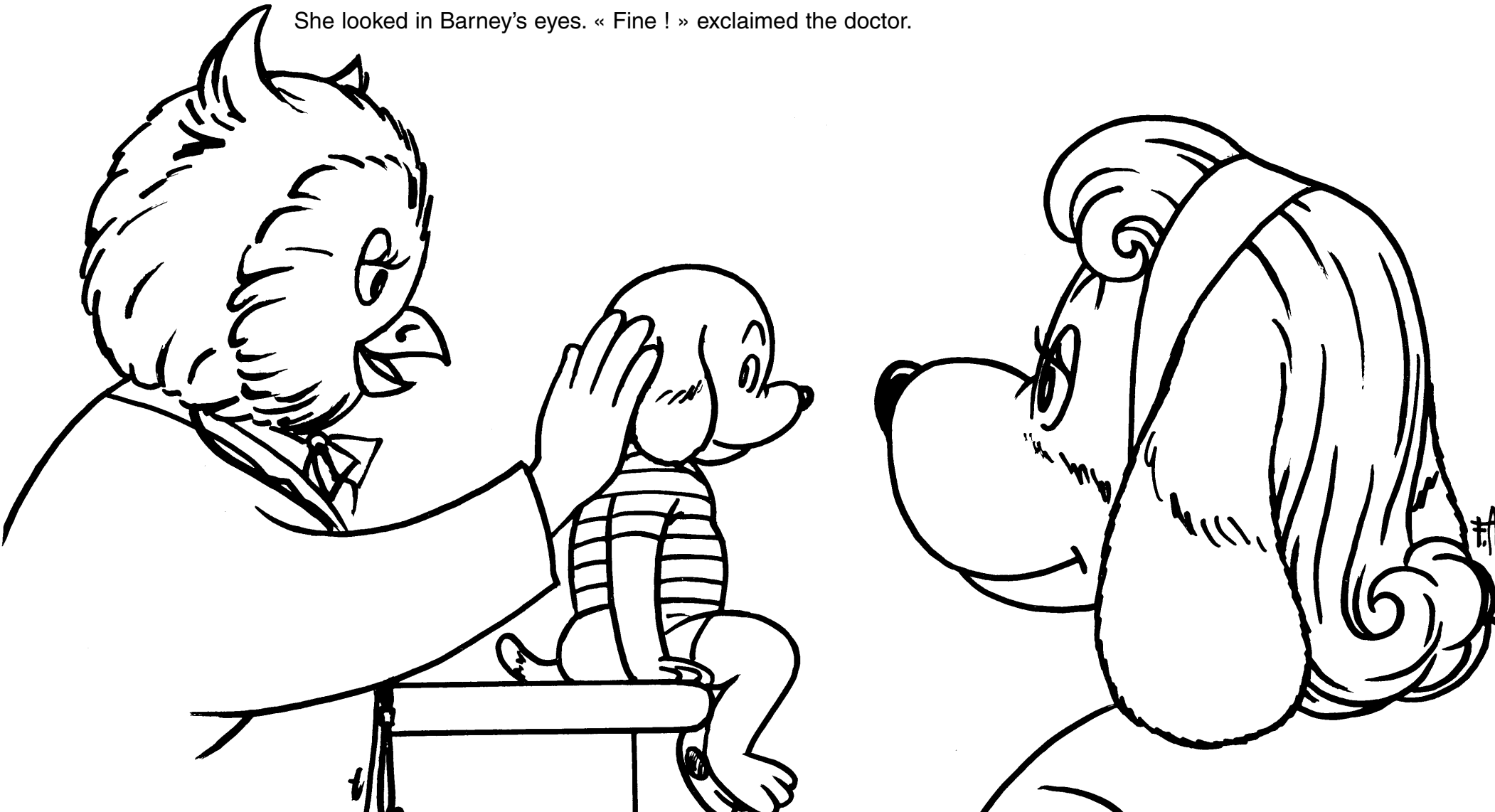


Dr. Owl was friendly, but started the examination quickly. She had a lot of puppies to take care of and there was no time to waste.

Dr. Owl tested the shunt through the skin by gently pressing the shunt tubing. She looked for signs of increased pressure. She checked the fontanelle or soft spot on the top of Barney's head. It did not bulge.

« That's fine », said Dr. Owl.

She looked in Barney's eyes. « Fine ! » exclaimed the doctor.



Dr. Owl measured Barney's head.

« That's fine, » said the doctor

Dr. Owl asked Mrs. Beagle whether Barney had shown any signs of irritability, listlessness or drowsiness lately.

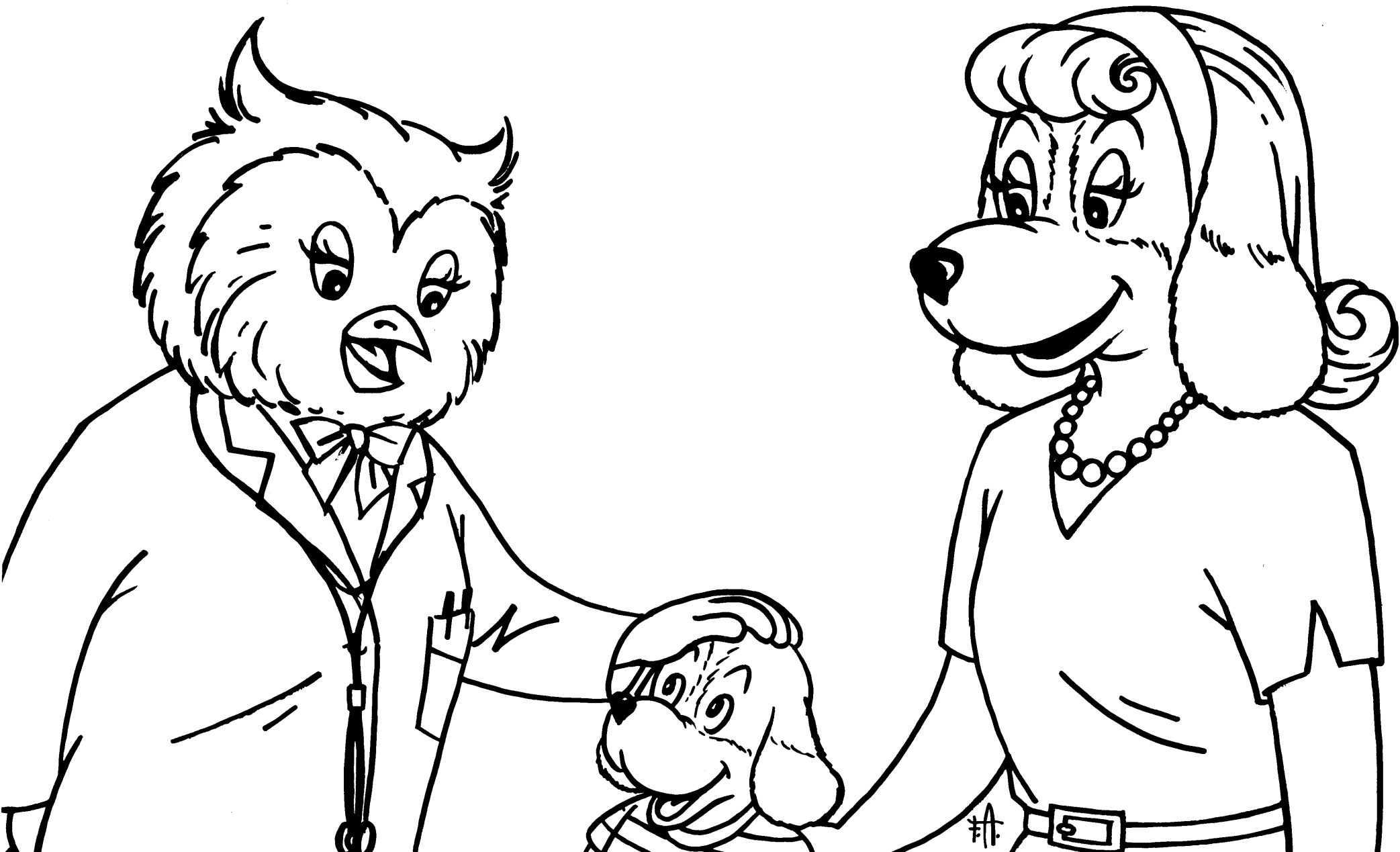
« No ! » said Mrs. Beagle.

« How is Barney doing in school ? » asked Dr. Owl.

« Fine ! » replied Mrs. Beagle.



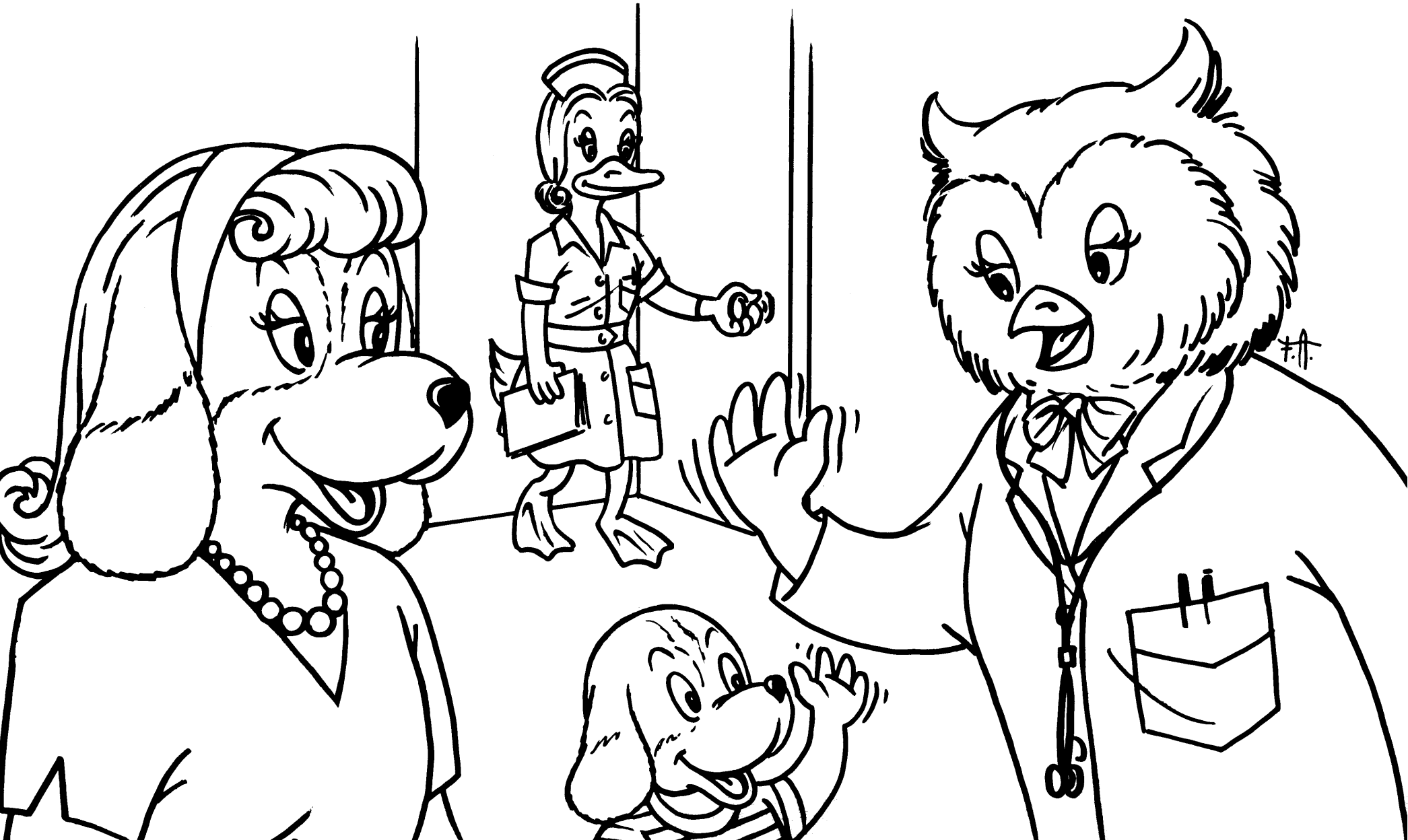
« As Barney continues to grow, it may be necessary to adjust the system during another operation », said Dr. Owl, « But that may not be for a long time ».



Nurse Duck entered the examining room. Dr. Owl had finished the exam and left to see another patient.

« Take care, Mrs. Beagle. Barney is fine. » said Dr. Owl.

« Bye, Barney, » said Dr. Owl. « See you in a few months. »

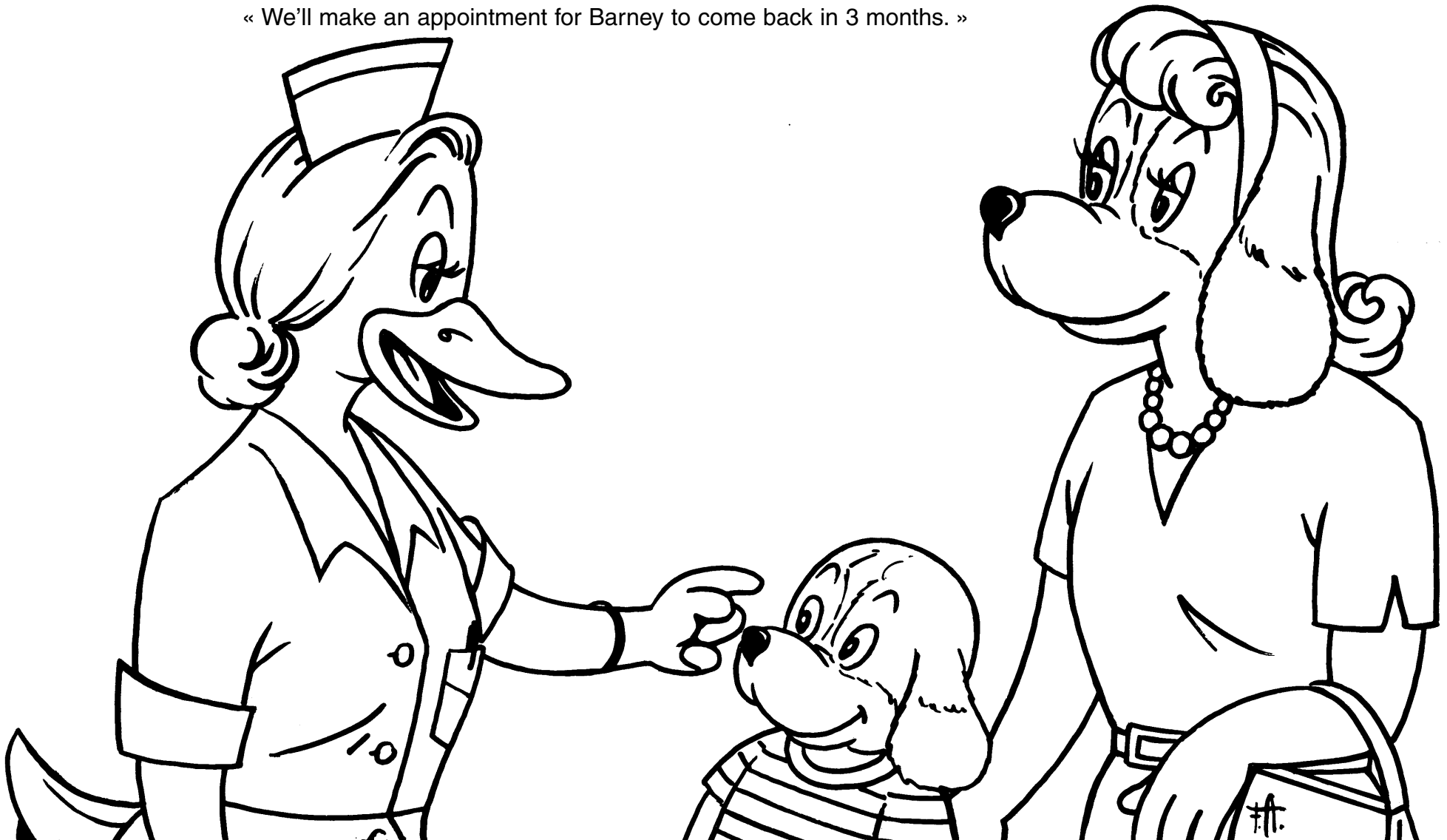


« Another check-up will be needed in a few months », said the nurse.

« Look at the skin over Barney's shunt once in a while to make sure that it isn't red or sore » cautioned Nurse Duck.

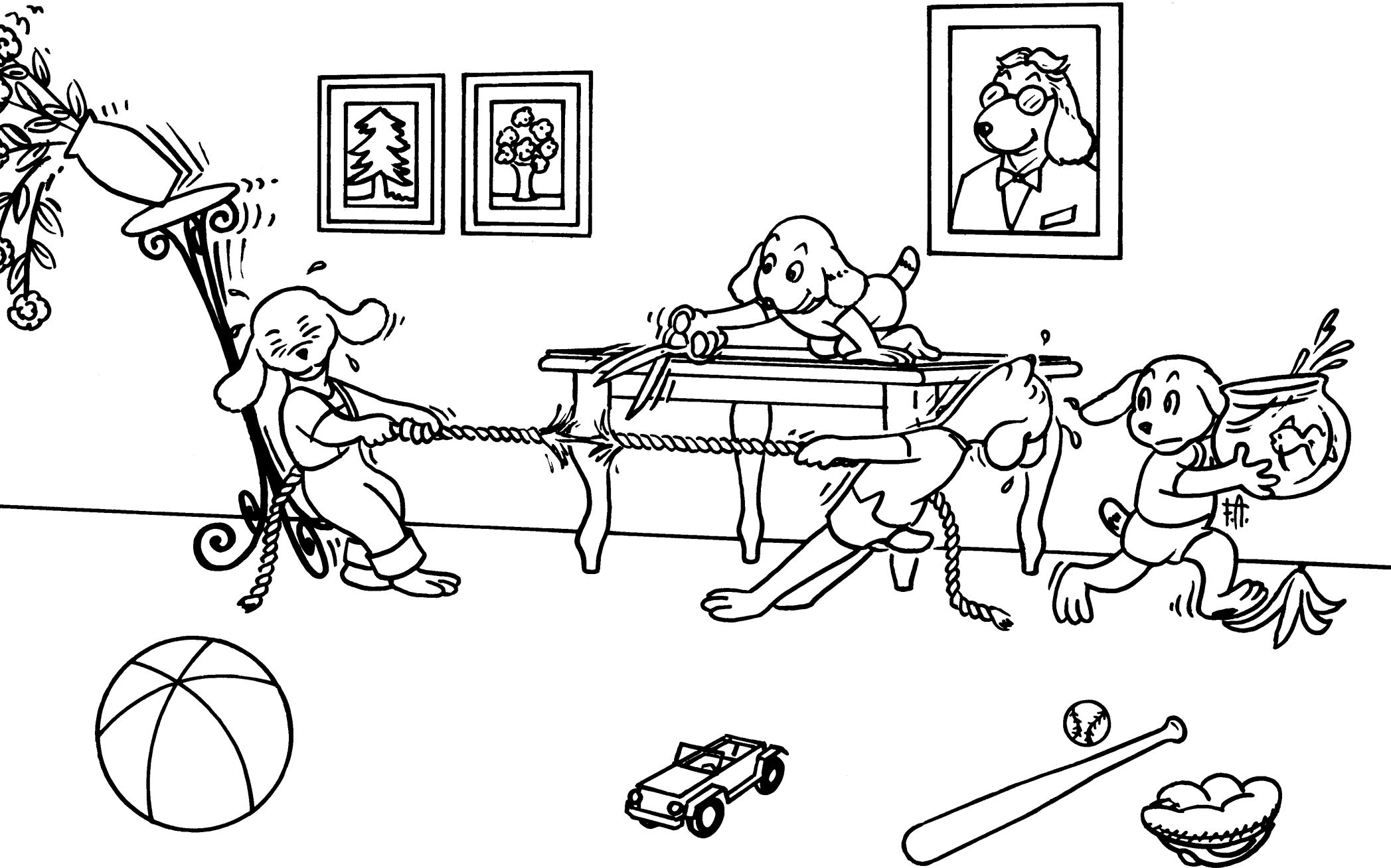
« If redness or soreness is noted, contact Dr. Owl immediately for instructions. Headaches, irritability, bulging of the soft spot on top of the head may, among other things, be signs of a shunt problem. If you see any of these, you must contact the doctor right away, » said the nurse.

« We'll make an appointment for Barney to come back in 3 months. »

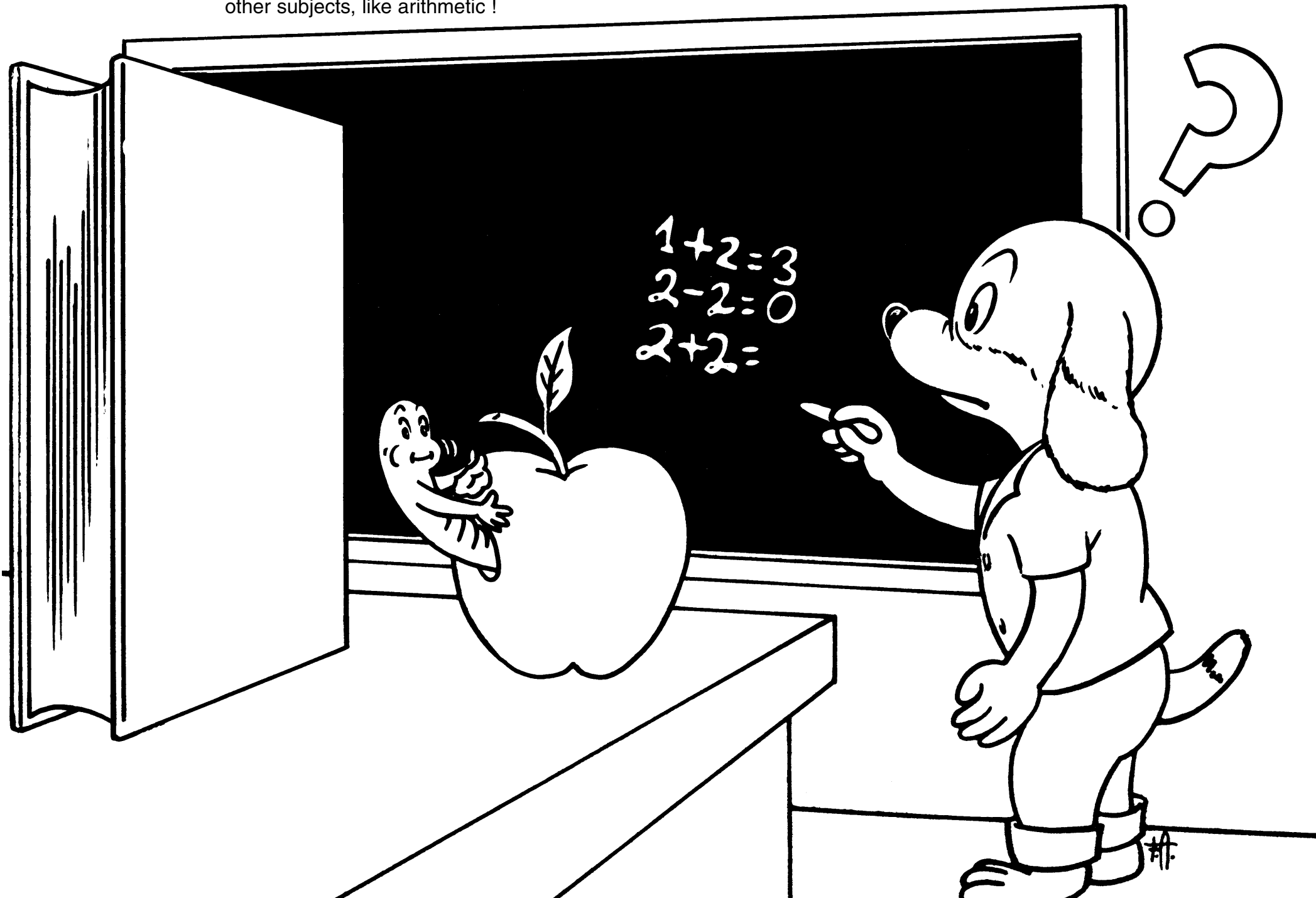


Barney went home with his parents and sister. He continued to grow bigger and stronger. Every few months he visited Dr. Owl and Nurse Duck for check-ups.

As he grew, he played with all his friends.



He went to school and got very good marks in some subjects like spelling. He didn't do so well in other subjects, like arithmetic !



Barney's parents and the doctors and nurses made sure that he got the best possible care.
Barney's shunt allowed him to get along as well as possible.



Just like any other little beagle.



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