

Tintin and Colleagues Go to the Doctor

I will go ahead and admit it: I am a Tintin fan, albeit a late one as I only started reading his adventures about 10 years ago. Because the new Steven Spielberg movie will open soon, I relooked at the comic books with special attention to items that may interest neuroradiologists. *The Adventures of Tintin* (Casterman) is a series of 23 books created by the Belgian artist Hergé (Georges Remi; his initials, backwards and pronounced in French sound like Her-ge). The first book appeared in 1929 and the latest in 1976, 7 years before Hergé died. Over 350 million copies translated into 80 different languages have been sold to date.¹

At the start of his adventures, Tintin is said to be about 14–15 years old, but his height is about that of a 7- or 8-year-old American boy today. Curiously, he does not appear to have aged during his long journalistic/investigative career (some Tintinologists disagree and calculate that he aged 3 years during the entire series of books²). A normal person would be at least 65 years old by the time *Tintin and the Picaros* (Casterman, 1976) came out and certainly ready to retire, yet he remained youthful and never even shaved! Dr Antoine Cyr, a Professor of Medicine at the University of Sherbrooke in Canada, and his 2 young sons appear to have found a plausible explanation for Tintin's youthfulness. In the 23 books, Tintin loses consciousness 50 times, most often related to trauma.³ These count as grade 3 concussions, which are medically characterized by loss of consciousness and amnesia longer than 5 minutes and 24 hours, respectively. It is not certain how many grade 1 or 2 concussions he had. Grade 1 concussions imply no loss of consciousness and amnesia lasting less than 30 minutes. Grade 2 concussions result in loss of consciousness lasting less than 5 minutes and amnesia between 30 minutes and 24 hours.⁴ Not surprisingly, most of Tintin's concussions were the result of being hit in the head with a blunt object, mostly a club, though once he was hit with a camel femur (*The Crab with the Golden Claws*, Casterman, 1941). Cyr et al³ concluded that Tintin suffered from growth hormone deficiency and hypogonadotropic hypogonadism from repeated head trauma. This diagnosis nicely explains his lack of growth, eternal youth, lack of facial hair, and a lack of libido (Tintin never develops an interest in sex or falls in love throughout the series). It is curious to note that these characteristics are the ones that endear him to males and females of any age or nationality.

Posttraumatic injury to the pituitary stalk may occur at the time of birth or later in life and result in acquired growth hormone deficiency.⁵ Trauma does not have to be severe, and this condition is known to also occur after only mild injuries. Polyuria (which Tintin does not have) can be absent and is probably due to collateral circulation and/or re-establishment of the hypophyseal portal system. Overall, growth hormone deficiency is the most common pituitary defect after traumatic brain injury.⁶ The MR imaging findings of this condition are well known to neuroradiologists: absent stalk, translocated posterior pituitary lobe, and diminished size of the adenohypophysis.

The second most important character in the *Adventures of*

Tintin is Captain Haddock who is introduced in the ninth book (*The Crab with the Golden Claws*). From a medical standpoint, Archibald Haddock is as interesting as Tintin. In his first 3 books, he is a weak character and an alcoholic who prefers rum (as I imagine any good sailor does) and whisky. The worst of his alcoholism shows up in *The Secret of the Unicorn* (Casterman, 1943) where he is in constant need of a drink, is emotionally erratic, confabulates, and lacks any insight into his condition (called "anosognosia"). These features are all compatible with Korsakoff encephalopathy. This syndrome is due to a chronic deficiency of thiamine (vitamin B₁) and results in altered memory, vision changes, and hallucinations, all of which Captain Haddock certainly displays in the *The Secret of the Unicorn*.

There are no specific imaging findings for Korsakoff encephalopathy, though many patients show atrophy of their mamillary bodies. This finding could be the sequela of Wernicke acute encephalopathy, another disease mostly of alcoholics that is also due to thiamine deficiency. MR imaging findings of Wernicke encephalopathy include hemorrhagic and/or enhancing mamillary bodies and increased T2 signal intensity along the walls of the third ventricle and periaqueductal gray matter. Another personality trait of Haddock is his continued and unexpected use of curses and insults (though never profanity). Men, and typically sailors, use this type of language more than women (exception: females in sororities). Expletives are generally used to convey anger. Haddock certainly has an angry temperament triggered by minimal provocation. Angry individuals have an increased incidence of hypertension and cardiovascular disease. Moreover, anger leads to carotid artery atherosclerosis, lending some truth to family members not uncommonly reporting that the patient "got so angry, he had a stroke."⁷

Captain Haddock is particularly and constantly annoyed at another character, Professor Calculus. The latter is half-deaf and constantly misunderstands what people are saying, which drives Haddock out of his mind. To make things worse, the Professor nearly always responds to Haddock with exaggerated anger. To be fair, as the series goes on, Captain Haddock tapers his drinking, becomes somewhat heroic, enjoys a social life (rumors of an affair with La Castafiore appear in *The Castafiore Emerald* (Casterman, 1963), thus becoming a more likable chap. This miraculous change stems, in no small part, from his coming into a fortune when he finds a treasure hidden by an ancestor in *Red Rackham's Treasure* (Casterman, 1944)

Some of the funniest characters in the series are a pair of detectives who are identical twins and have names that are nearly identical in written and phonetic form in most languages. Thompson and Thomson (Dupond and Dupont in French) can be distinguished only by the shape of their mustaches. They clearly manifest echolalia (the automatic repetition of another's vocalizations) and echopraxia (the automatic repetition of movements made by another person). Echolalia has been documented in autistic twins, but Thompson and Thomson do not appear to be autistic. Patients with Alzheimer disease may also demonstrate echolalia, and because the detectives are quite forgetful, one wonders if they have some form of familial dementia.

Ms Bianca Castafiore is a mature opera singer who is ini-

tially despised by Captain Haddock. She is often foolish and absentminded (Alzheimer disease) repetitively singing the “Jewel Song” from Gounod’s *Faust*. Is this a form a palilalia? “Palilalia” is the immediate repetition of one’s own words. In younger children, it is probably normal and forms part of the learning process. La Castafiore probably does not have palilalia as patients affected by it commonly stutter, something she does not. Despite being an opera diva, she suffers from abnormal phonemic awareness and is unable to distinguish words that rhyme (the jokes related to rhyming—originally written in French—lose much of their bite when translated). Of the lesser characters, Nelson the butler is perhaps the one who shows up most. He does not show any physical or psychological abnormalities, but maybe we do not get to know him well enough to detect any abnormality.

Socially, Hergé committed some faux pas. Take his *Tintin in the Congo* (*Le Petit Vingtième*, 1931), where Africans are portrayed as primitive and the overall attitude of the book is paternalistic. Conceivably, this is just a reflection of the spirit of that time, but it has led to multiple revisions of the book and to it being the last one published in English (it was banned in many countries). Animal cruelty is omnipresent, and stereotyping of individuals (Jews, Native Americans) is also common throughout the series.

Tintin is certainly not the only comic book character to suffer repeated head trauma. A study of traumatic brain injuries has been done in another French-language comic book character: Asterix.⁸ This series was created by Rene Goscinny and started in 1959. Asterix is a Gaul warrior resisting the Roman invasion of Gaul in about 50 BC. More than 700 traumatic brain injuries—mostly to males—occur throughout the 34 books. More than 50% of the injuries are moderate with Glasgow Coma Scale scores of 9–12. Thirteen characters show signs of decerebrate posturing. As expected, it is the Romans who suffered the most head injuries, and the most severe ones happened when helmets were not being used. Despite the large number of injuries, it appears that no character suffered long-term sequelae.

Digging into the psyches of beloved children’s characters may elicit a flurry of complaints and controversies. This is what happened when a group of researchers from Halifax, Nova Scotia attempted to explain the behavior of Winnie the Pooh.⁹ The famous bear is now believed to have attention deficit/hyperactivity disorder (ADHD) of the inattentive subtype. Comorbidity includes impulsivity, cognitive impairment, and finally obsessive fixation (to honey) which leads to . . . obesity. There are bumps on his head suggesting child (or bear) abuse. These modern neurodevelopmentalists suggest that Pooh needs medication to be fitter and more functional. The other characters do not escape being medically assessed by the authors of the article. Piglet is given a diagnosis of generalized anxiety disorder; Eeyore has a dysthymic disorder; Owl, a reading disorder; and Tigger also has ADHD.

Tintin, Asterix, and Pooh do not go to the doctor in any of the books, but at least in Tintin’s case, doctors appear in the comic books. Dr Muller shows up in 3 books (*The Black Island* Casterman, 1938; *The Land of Black Gold*, Casterman, 1950; and *The Red Sea Sharks*, Casterman, 1958). His background and specialty are never given (I am not even sure that he is a medical doctor). Dr Krollspell appears in only 1 installment

(*Flight 714*, Casterman, 1968) and is the head of a psychiatric clinic. Later he loses his memory when kidnapped by aliens who give him some undefined “treatment.” It is hinted that both of these nefarious characters are ex-Nazis. The last is Dr Patella, who, in accordance with his name, is an osteopath. He appears in 2 books (*Destination Moon*, Casterman, 1953; and *Explorers on the Moon*, Casterman, 1954), where he treats an unconscious Haddock when arriving back to earth.

Should we, and particularly our children, be allowed to read about this bunch of sick characters? Would an older, bearded, libidinous Tintin make more sense? Or, a cowardly Asterix who never fights? Would a leaner more efficient Pooh be a better character? Some think that these characters should go to the doctor; I like them just as they are and prefer not to know what their MR images would show.

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EDITORIAL

Warning: Side Effects May Include a Decrease in Invasive Procedures

Endovascular procedures have certainly been a tremendous advance, allowing the minimally invasive treatment of diseases throughout the body that previously required “major” surgery. I feel fortunate to have been able to practice these techniques during such an exciting time of innovation. However, patients will want us to progress to even less invasive options in the future, and the ultimate in minimally invasive procedures is no procedure at all. The Stent placement and Aggressive Medical Management for Preventing Recurrent Stroke in Intracranial Stenosis (SAMMPRIS) trial is an example of how the need for an invasive procedure can be obviated by proper medical therapy.¹

Just as our endovascular procedures improve with time,