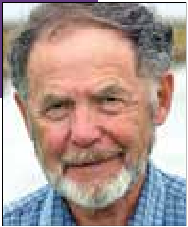

Art of Family Medicine

Sharing a cup of tea

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[Peter Rabbit's] mother put him to bed, and made some chamomile tea: "One table-spoonful to be taken at bedtime."
Beatrix Potter, *The Tale of Peter Rabbit*

Many years ago I had a hyperalert patient who complained of "difficulty sleeping." I discovered that he drank 40 cups of black tea a day. Black tea is black because the dried tea leaves have oxidized and the organic material has been converted to tannins. Among its ingredients, black tea contains theophylline, a mild diuretic, and caffeine (a 4-oz [125 mL] teacup has on average 24 mg of caffeine).

In this patient's case, finding the problem was easy, but solving the problem was not. The Peter Rabbit bedtime approach did not work.

Since that time I have paid attention to tea, which, incidentally, is second only to water in planetary consumption.[1]

Neurologic test with teacup and saucer

I remember reading Pat Barker's *Regeneration,* the first book of her award-winning Regeneration Trilogy on the First World War. Barker portrays the real-life neurologist and social anthropologist Dr William Rivers. Dr Rivers was in charge of Craiglockhart, a hospital outside of Edinburgh, Scotland, which treated soldiers with shell shock. He used a cup of tea not only to build a social bridge with the patient but also for diagnostic purposes: "His hands, doing complex things with cup, saucer ... were perfectly steady. One of the nice things about serving afternoon tea to newly arrived patients was that it made so many neurological tests redundant."[2]

What are the complexities involving one's relationship with a teacup and saucer, and what information can be obtained? The test begins with observing the hand that holds the teacup, which usually answers the question of dominant hemisphere. Then there are the tremors to which Dr Rivers alludes; they are particularly evident when the cup is on the saucer. You can hear the tremor, as well as see it. The common tremors are familial, anxiety related, hyperthyroid related, and parkinsonian. The latter tremor should stop when the person reaches for the cup.

Lifting the teacup involves opposition of the thumb and index finger and the function of the abductor pollicis longus (posterior interosseous nerve, radial nerve [C5 to T1]).[3] Bringing the teacup to the mouth involves elbow flexion using the biceps and brachialis muscles (musculocutaneous nerve [C5 and C6]). When the cup arrives under the nose, a little sniff causes the olfactory system to disclose the distinctive scent of bergamot if the tea is Earl Grey. The next movement is a protrusion of the lips, which is brought about by the orbicularis oris (cranial nerve VII, inferior pons). When the tea enters the mouth, temperature receptors will send messages along the spinothalamic tract to the thalamus, allowing you to respond appropriately to the heat of the tea. Next, if you are drinking black tea, the taste buds will determine bitterness, unless milk and sugar have been added to overcome the natural bitterness of tannins, in which case you will get a sweet taste. Tea does have a smidgen of salt, just enough to enhance flavour but not enough to taste (cranial nerves VII, IX, and X; gustatory cortex). When you swallow the tea, a series of muscles close off access to the trachea and the tea is propelled down the esophagus. This process is mostly enervated by the cranial nerve X.

And there you have it: you are well started on your neurologic examination in less than a minute in a nonintrusive, relaxing manner.

History and culture of tea

Tea has a long and fascinating history. Its origins are in China but it spread throughout Asia and Europe thanks to Portuguese, Dutch, and British traders. Tsar Michael I (reign 1613 to 1645) introduced tea to Russia,[1] and in the stories of Tolstoy and Chekhov, I clearly remember the samovar dispensing tea around the clock, providing a focus for interaction and warming Peter Rabbit comfort.

Today, there are many varieties of teas and ways of preparing and serving tea. There are tea ceremonies. Tea drinkers are found worldwide, but in terms of annual consumption, India is in first place while Turkey has the highest per capita intake[4]; and I suspect the British high tea with its clotted cream continues to take the cake for most collateral calories. So, if one were to look for a unifying cultural gesture for welcoming friends and strangers, it would be sharing a cup of tea. Precisely what Dr Rivers did with his patients returning, with their world in turmoil, from the trenches of World War I. While reading Dr Rivers' tea interviews, I was impressed with the egalitarian nature of sharing a cup of tea: the cycles of talking, then sipping and listening. The teacup is also an instrument for nonverbal signals: putting the empty tea cup forward for a refill or putting the empty cup down with your hand over it to end the process.

Dr C. Lamont MacMillan

Dr MacMillan, author of *Memoirs of a Cape Breton Doctor*, practised solo rural medicine in Baddeck, NS, from 1928 to 1966. The territory he covered was about 150 miles long.[5] He was out day and night in all kinds of weather and he used all available methods of transportation—whatever it took to attend a patient and get back home. In the winter he would go out over the ice of the Bras d'Or Lake or across St Ann's Harbour with a horse and sleigh or in his Essex car. Sometimes he walked. Using the ice as a highway could be treacherous, especially in the shoulder seasons. He recounts the date April 1, 1931, when he had 3 calls to make, all in the direction of North River. His first stop was St Ann's Harbour where he reset a fracture. Then he set out for North River. The road to North River was in poor condition and he knew he could save 3 hours by crossing the ice over St Ann's Harbour. So he started out over the ice in a sleigh with his horse, Gypsy Lee. The horse would not trot, which meant she was uneasy. About a mile out on the ice, Gypsy Lee's forefeet went through the ice. Before they reached the shore on the North River side, Gypsy Lee's hooves had gone through the ice many times—fortunately, never all 4 at once. If that had happened, the doctor recounted, "that would have been it."[5] At 10 PM Dr MacMillan had finished his housecalls and headed back to Baddeck.

"When I got on the ice at Murray [Gypsy Lee] cut across the mouth of North River and went ashore at Monroe's Point. She just refused to head out on St. Ann's Harbour ice."[5]

And so began the arduous trip back to Baddeck on the unbroken road over the North Gut Hills. A very tired doctor and horse traveled all night and arrived in Baddeck the next morning at daybreak. Although exhausting, stressful trips like this were in a way compensated by the warm reception he received along the way with the ready loan of horses and equipment, cups of tea, and nourishing food, they did take their toll.

Early in his career, Dr MacMillan was called to see a 9-year-old boy who had fallen and injured his elbow.

"On examination, I suspected he had a fracture of the lower end of the humerus and a dislocation of the elbow."[5] Dr MacMillan believed that the boy should be sent to North Sydney, NS, for an x-ray. The boy's father argued that none of the doctors before bothered to take an x-ray. So, Dr MacMillan relented and gave the boy a chloroform anesthetic. He reduced the dislocation, got the fracture back into place, acutely flexed the elbow, and put on a posterior slab and cast with a collar and cuff sling. Then he reflected, "My diagnosis for the next several years had to be based upon clinical examination without the aid of any x-rays or lab work ...."[5]

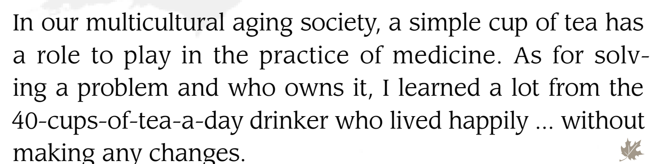
Young's postulate

"The last doctor to see the patient is the smartest."[6] Dr Young works in an emergency department (ED) and has seen this postulate at work. Problems missed referred to the ED; problems missed in the ED. Dr Young concludes, "If you wait long enough, nearly anyone can make the correct diagnosis." He also explains that this process should teach us humility and that we should be able to communicate to patients and families that in an evolving process, a follow-up visit might be required.

Dr C. Lamont MacMillan had once said to his son, Dr Monty MacMillan: "You can solve a lot of problems with a cup of tea" (Dr Monty MacMillan, personal communication, November 2014). By that he meant that in exhausting, stressful situations when your horse is making better judgments than you are, mistakes are inevitable. Or if your medical standards are compromised by the context of a situation, choose wisely. But the overriding principle is to keep communication open with your patients and their families and that is best done sharing a cup of tea.

Conclusion

In our multicultural aging society, a simple cup of tea has a role to play in the practice of medicine. As for solving a problem and who owns it, I learned a lot from the 40-cups-of-tea-a-day drinker who lived happily ... without making any changes.



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Competing interests
None declared

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