

Preface

Aspirin-Exacerbated Respiratory Disease: The Hunt for the “Rosetta Stone” of Respiratory Inflammation



Andrew A. White, MD
Editor

Undecipherable for centuries, Egyptian hieroglyphics persistently resisted attempts at translation. Since they were unable to interpret this written language form, archeologists and explorers stared in wonder, albeit perplexedly, at the written history of the Pharaohs, Queens, and Priests inscribed on the walls around them. This left the 3000-year history of the ancient Egyptians lost to modern understanding. Deciphering the hieroglyphics might never have occurred were it not for the discovery of the Rosetta Stone in 1799, an ancient stone inscribed with a royal decree in three written forms: Greek, Demotic script, and ancient Egyptian hieroglyphics. With the discovery of the Rosetta Stone, the key to the discovery of hieroglyph translation materialized. Greek scholars were able to slowly piece together the meaning of some scattered hieroglyphic symbols. Although the three scripts were communicating the same message, it was only by consolidating the work of multiple researchers in the subsequent 20 years that Champollion was able to generate a thorough list of Egyptian symbols in 1821 and crack the code. This ushered in a renaissance in the study of ancient Egyptian culture.

A similar occurrence is crucial in the investigation of aspirin-exacerbated respiratory disease (AERD). Since its first description in 1922, nearly 100 years later, we still do not have an explanation for the relatively sudden development of the disease in healthy individuals. As a specific endotype of asthma and chronic rhinosinusitis with nasal polyps, unraveling the mechanisms in AERD could dramatically illumine our understanding of type 2 airway inflammation. Although chronic rhinosinusitis and asthma are multifactorial in their genesis, the stereotypical onset of AERD begs for a singular explanation. Were we able to define the event that “turns on” AERD, it would

truly be a watershed moment in understanding environmentally triggered chronic eosinophilic respiratory disease. The last five years have produced many successful research endeavors that have whittled away at the enigma of AERD. However, we still do not see things clearly. Several basic mechanistic questions evade explanation. Similar to adventurers with a golden sarcophagus before them, yet unable to even name the individual it contained until the language could be properly translated, we understand that AERD holds tremendous clues to type 2 respiratory inflammation. We just don't yet know what those are.

These articles outline the advances in the various facets of this perplexing disease, on both a basic science and clinical level. The authors connect new research findings to our expanding disease paradigm. They point toward translational research targets designed to understand mechanisms and then take these answers to the patient in the form of a targeted treatment.

Andrew A. White, MD
Division of Allergy, Asthma, and Immunology
Scripps Clinic
3811 Valley Centre Drive, S99
San Diego, CA 92130, USA
E-mail address:
white.andrew@scrippshealth.org