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Review Article

Contribution of Dr. Y.M. Bhende in the Field of Pediatrics

Kasumbiwal Ajay H.[1], Rohit Male H.[2], Tukaram Narwate B.[3], Devshette Susheel Suresh[4]

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ABSTRACT

Dr. Y.M. Bhende is a pioneering Indian medical scientist whose discovery of the Bombay Blood Group (hh phenotype) in 1952 transformed the field of transfusion medicine. While investigating an unusual transfusion reaction at KEM Hospital, Mumbai, he identified a completely new blood group lacking the H antigen, which is essential for the formation of A, B, and O groups. This breakthrough brought global attention to the importance of rare blood groups and their role in preventing fatal transfusion reactions. Dr. Bhende's work holds special relevance in pediatrics, where safe transfusions are critical for children with conditions like thalassemia, leukemia, and surgical needs. Despite limited resources in the 1950s, his dedication, scientific curiosity, and meticulous observation led to a discovery that continues to save lives worldwide. His contribution stands as a strong reminder of the impact committed Indian scientists have made in advancing global healthcare.

Key Messages: Provide appropriate messages of about 35-50 words to be printed in centre box:

KEYWORDS

• Bombay Blood Group • Transfusion Medicine • Rare Blood Typing • Dr. Y.M. Bhende

Author's Affiliation:

[1] Professor & HOD, Department of Pediatrics, VDGMC, Latur, Maharashtra, India.
[2] Assistant Professor, Department of Pediatrics, VDGMC, Latur, Maharashtra, India.
[3] Senior Resident, Department of Pediatrics, VDGMC, Latur, Maharashtra, India.
[4] Student, Department of Pediatrics, VDGMC, Latur, Maharashtra, India.

Corresponding Author:

Devshette Susheel Suresh, Student, Department of Pediatrics, VDGMC, Latur, Maharashtra, India.
E-mail: susheel.devshette@gmail.com

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INTRODUCTION

In the field of medical science, there are some scientists whose discoveries bring major changes in healthcare and save countless lives. One such scientist is Dr. Y.M. Bhende, who played an important role in the discovery of the Bombay Blood Group. I chose Dr. Bhende because his work has a deep impact on both pediatric and adult medicine, especially in the area of transfusion safety. Blood transfusions are common in many pediatric conditions like thalassemia, leukemia, or major surgeries in children. His discovery has helped save lives by avoiding fatal transfusion reactions, especially in rare cases. Although his name is not as widely known as other scientists, his contribution is extremely valuable to pediatrics and medicine in general.

Background:

Dr. Y.M. Bhende was born in India in the early 20th century. Not much is publicly available about his early childhood, but what we do know is that he pursued his education in the field of medicine and dedicated his life to pathology. He was associated with KEM Hospital and Tata Memorial Hospital in Mumbai, which are among the most respected institutions in India.

His work was guided by strong principles, scientific curiosity, and a deep concern for patient safety. Dr. Bhende had a keen eye for observation and detail, which eventually led him to discover something that others had missed.

Scientific Contributions:In 1952, Dr. Bhende made a groundbreaking discovery while working at the KEM Hospital

Blood Bank. A patient was reacting to blood transfusions despite being given the correct ABO and Rh-matched blood. Dr. Bhende and his colleagues investigated the case and found that the patient lacked a specific antigen, which most people have. This led to the discovery of a new blood group now known as the Bombay Blood Group (also called hh phenotype).

This was a major breakthrough in transfusion medicine. The Bombay blood group is extremely rare and can be easily misidentified as group O. However, if a person with Bombay group receives normal O group blood, it can cause serious reactions and even death. Dr. Bhende's discovery brought awareness about this rare group, and it has helped doctors take proper precautions during transfusions, especially in children with conditions needing repeated blood.

His contribution has helped identify many pediatric patients with rare blood groups and has saved lives through proper screening and matching. Today, when a child is born with a rare blood group, it is because of Dr. Bhende's discovery that doctors know how to manage it safely.

Challenges & Breakthroughs:

During the 1950s, research facilities in India were not very advanced. It was difficult to carry out detailed laboratory tests, and there was limited access to international research. Despite these challenges, Dr. Bhende used his sharp thinking and laboratory skills to discover something entirely newConvincing the medical world about the existence of a new blood group was also not easy. It required repeated testing, strong evidence, and scientific explanation. But Dr. Bhende did not give up. His team's hard work and belief in their observations finally led to the recognition of the Bombay blood group in international medical literature.

His breakthrough shows how Indian scientists have made valuable contributions to world medicine, even with limited resources.

Reflection:

As a medical student, I find Dr. Bhende's journey very inspiring. He teaches us that being curious, observant, and dedicated can lead to great discoveries. His work reminds us to always look beyond the obvious, especially when something doesn't seem right with a patient. For those of us who want to work in pediatrics, his contribution is a reminder that even rare conditions in children should be handled with care and proper understanding. Moreover, Dr. Bhende's story tells us that even if you are not world-famous, your work can still have a life-saving impact on generations of people. He followed his duty with sincerity and contributed silently but powerfully to medical science.

CONCLUSION

Dr. Y.M. Bhende's discovery of the Bombay Blood Group has saved many lives, including those of children needing safe blood

transfusions. His journey from being a doctor in Mumbai to a globally recognized scientist shows that passion for knowledge and care for patients can lead to great contributions in medicine. As students, we can learn to be more observant, dedicated, and courageous in our learning journey. His life is a true example of how one person's discovery can make a lasting difference in the world of pediatric health and beyond.

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Conflict of Interest: Nil

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