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The Stomach Flu is Not the Flu at All. Learn About the Norovirus, Its Symptoms, and How to Prevent It

Atul Gouda[1], Siddhant Raj Gouda[2], Anushka Rani Gouda[3]
[1, 2, 3]*Visva-Bharati Central University, Santiniketan,west bengal*

I. INTRODUCTION

A contagious virus is the norovirus. It is the most frequent cause of outbreaks and is acknowledged as a main cause of acute gastroenteritis worldwide. The major way that noroviruses transmit is from person to person and they are quite contagious. Vomit that has been aerosolized can also contaminate large areas of the environment and help the disease spread. In semi-closed environments like planes, these characteristics contribute to broad and uncontrollable epidemics. Numerous locations, including hospitals, cruise ships, schools, jails, and childcare facilities, have reported outbreaks.In Australia, healthcare facilities, childcare centres, and aged-care facilities (ACF) are where norovirus outbreaks are most frequently reported. These epidemics can have an effect on our economic and social systems in addition to having a significant negative impact on our health care system.

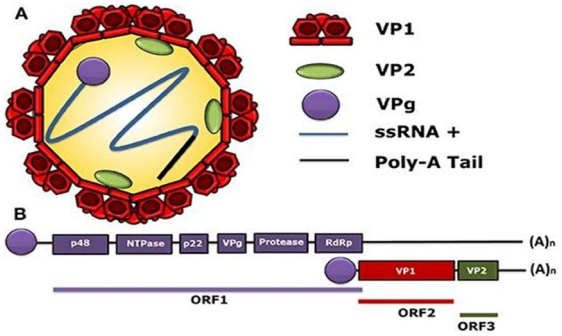
II. HISTORY

Albert Kapikian identified Norovirus as the etiological cause of the pandemic in 1972. Stool samples from a volunteer who had been experimentally injected with a faecal filtrate from the original outbreak were studied using immunological electron microscopy (IEM). As a result of these investigations, Kapikian proposed the "Norwalk virus" as the outbreak's primary cause. This was the first human virus that was specifically linked to gastroenteritis.

III. VIRUS STRUCTURE

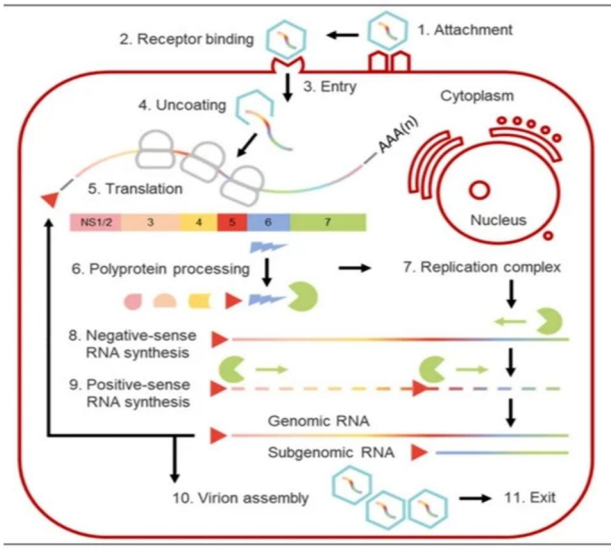
The family Caliciviridae and the genus Norovirus are home to human noroviruses. Their positive-sense, single-stranded, linear RNA genome is only about 7500 nucleotides long and is relatively tiny. In 1990, the prototype (GI.1) of noroviruses, the Norwalk virus, had its first fully sequenced genome (Xi et al., 1990). Three overlapping open reading frames make up the genome (ORF1–ORF3). A polyprotein called ORF1, with a size of roughly 5100 nucleotides, is encoded by ORF1 and includes the structural protein VPg as well as nonstructural proteins including 3C-like protease and 3D-like RNA-dependent RNA polymerase.

The major capsid protein known as viral protein 1 (VP1) is encoded by ORF2, which has a size of roughly 1600 bases. VP1 is further divided into the shell (S), protruding 1 (P1), and P2 subdomains (Prasad et al., 1999). ORF3 and VPg, a structural protein with a size of about 5100 nucleotides, and nonstructural proteins including 3C-like protease and 3D-like RNA-dependent RNA polymerase are all encoded by this gene. The major capsid protein known as viral protein 1 (VP1) is encoded by ORF2, which has a size of roughly 1600 bases. VP1 is further divided into the shell (S), protruding 1 (P1), and P2 subdomains (Prasad et al., 1999). The minor capsid protein known as VP2, which is encoded by ORF3 and has a size of roughly 720 bases, may serve to stabilise the capsid virion (Bertolotti-Ciarlet et al., 2003, Vongpunsawad et al., 2013). The 3′ end of the genome has a polyadenylated tail, while the 5′ end is covalently connected to VPg (Daughenbaugh et al., 2006).



IV. REPLICATION

The virus is endocytosed through attachment to host receptors in a manner independent of clathrin and caveolin. The viral genomic RNA is released into the cytoplasm after being uncoated. The replication proteins are produced by removing VPg from the viral RNA, which is subsequently translated into a processed ORF1 polyprotein. Viral factories are where replication happens. The genomic ssRNA(+) is used to create a dsRNA genome. Viral mRNAs and new ssRNA(+) genomes are produced as a result of transcription and replication of the dsRNA genome. The capsid protein and VP2 are produced via subgenomic RNA translation. fresh viral particle assembly and release by cell lysis.



V. SYMPTOMS

1) Norovirus causes inflammation of the abdomen or intestines.
2) This is known as acute intestinal flu.A person sometimes develops symptoms twelve to forty eight hours when being exposed to norovirus.
3) Most people with norovirus malady improve at intervals one to 3days.
4) If you've got norovirus malady, you'll feel extraordinarily sick, and vomit or have diarrhoea persistently every day. this may result in dehydration, particularly in young kids, older adults, and {other people|and folks} with other sicknesses

VI. TREATMENT

1) Drink a lot of fluids if you have norovirus illness to avoid dehydration, which can cause significant issues.
2) Call a healthcare provider if you believe you or someone you are caring for is very dehydrated.
3) There are no particular medications available to treat norovirus in patients. Since antibiotics combat bacteria rather than viruses, they are ineffective.

VII. REHYDRATION METHOD

1) Rehydrating the body's fluid stores is necessary to treat dehydration.
2) Consuming clear liquids like water, clear broths, frozen water or ice pops, or sports drinks can help you achieve this (such as Gatorade). However, some dehydrated individuals will need intravenous fluids to rehydrate. Dehydrated people should stay away from caffeinated beverages including sodas, coffee, and tea.
3) Dehydration's underlying causes should be treated with the right medication in addition to dehydration itself.

VIII. HOMEMADE ORAL REHYDRATION SALTS (ORS)

Making a 1 (litre) solution at home with salt, sugar, and water The recipe for an oral rehydration solution is as follows.
Ingredients:

1) Half (1/2) level teaspoon of salt and six (6) level teaspoons of sugar
2) five cups of water from one litre of clean, boiling water or water that has been cooled (each cup about 200 ml.)

IX. CONCLUSION

In hospitals and the general public, norovirus is a significant contributor to morbidity from acute gastroenteritis. The disease has a large negative impact on the health care system even though mortality is mainly restricted to the oldest and youngest people. Therapeutic therapy is often supportive, and developments in molecular diagnostics may help to identify epidemics sooner and reduce person-to-person transmissions, especially in patient populations who are more susceptible to infection. New diagnostic techniques will boost ongoing global reporting activities.

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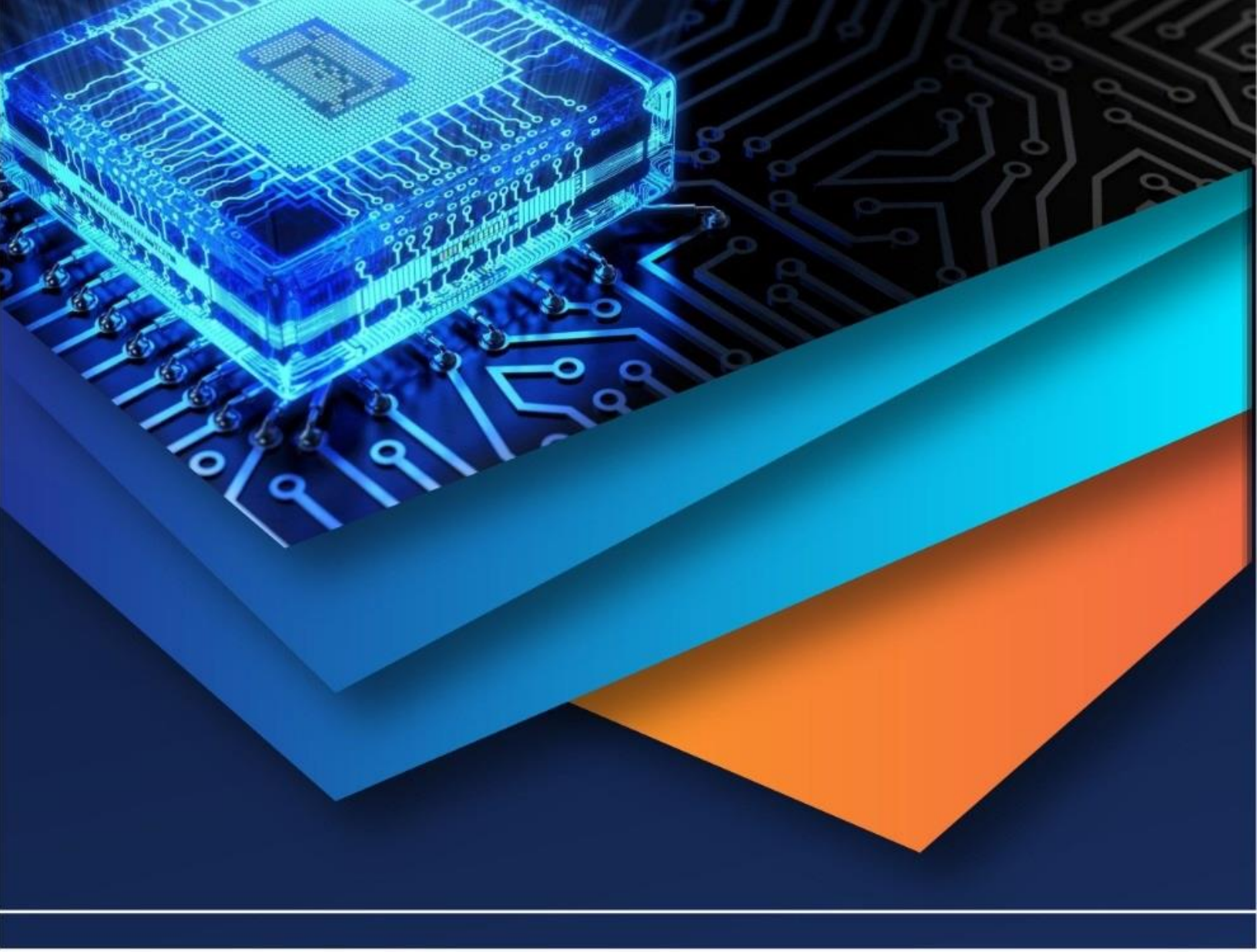

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