Immunization

inclusive term denoting the process of inducing or providing active or passive immunity **artificially** by administering an immunobiological

immunity

An inherited or acquired state in which an individual is resistant to the occurrence or the effects of a specific disease, particularly an infectious agent

Immunity

Antibody—A protein, found mostly in serum, that is formed in response to

exposure to a specific antigen

Antigen—A variety of foreign substances, including bacteria, viruses, toxins,

and foreign proteins, that stimulate the formation of antibodies

Immunity

Immunity—An inherited or acquired state in which an individual is resistant to

the occurrence or the effects of a specific disease, particularly an infectious

agent

Natural immunity—Innate immunity or resistance to infection or toxicity

Acquired immunity—Immunity from exposure to the invading agent, either

bacteria, virus, or toxin

vaccination

Vaccine—A suspension of live (usually attenuated) or inactivated microorganisms

(e.g., bacteria, viruses, or rickettsiae) or fractions of the microorganism administered to induce immunity and prevent infectious disease or its squeal

Attenuate—Reduce the virulence (infectiousness) of a pathogenic

vaccination

- **Toxoid**—A modified bacterial toxin that has been made nontoxic but retains the ability to stimulate the formation of antitoxin
- **Antitoxin**—A solution of antibodies (e.g., diphtheria antitoxin, botulinum antitoxin) derived from the serum of animals immunized with specific antigens and used to confer passive immunity and for treatment

vaccine

The vaccine should have the following specifications:

1-Do not cause illness to the recipient

2. The possibility of making it with ease of giving and safely.

3. Gives effective immunity for a longer time

4. Free of pollution and side effects few

COMMUNICABLE DISEASES

The incidence of childhood communicable diseases has declined significantly since the advent of immunizations.

The use of antibiotics
and antitoxins has further reduced serious complications resulting from such infections.

Hepatitis B Virus

HBV is a significant pediatric disease because HBV infections that occur during childhood and adolescence can lead to fatal consequences from cirrhosis or liver cancer during adulthood.

Diphtheria

Agent— *Corynebacterium diphtheria*

Transmission—Direct contact (mucous membranes of nose

and nasopharynx with infected person, a carrier,

or contaminated articles

Incubation period—Usually 2-5 days, possibly longer

Infectious Period—

usually 2 wk. but as long as 4 wk.

Signs and symptoms

frank epistaxis , low-grade fever , white or **gray** membrane; lymphadenitis possibly pronounced (“bull’s neck”); hoarseness,

in severe cases, toxemia, septic

shock, and death within 6-10 days

Nursing diagnosis

Activity intolerance related to myocarditis

Decrease cardiac out put related to cardiomyopathy

Management

Bed rest

Administer of antibiotics for 2-3 weeks

Given antitoxin diphtheria

provide humidified oxygen as prescribed.

pertussis

Agent - *Bordetella pertussis*

Transmission - Direct contact or droplet spread from infected person;

Indirect contact with freshly contaminated article

Incubation period—6-20 days;

usually 7-10 days

Period of communicability—

Greatest during catarrhal stage

before onset of paroxysms

Signs and symptoms

Begins with symptoms of upper respiratory tract

infection, such as coryza , sneezing,

lacrimation, cough, and low-grade fever;

high-pitched crowing sound or

“whoop”

flushed or cyanotic, eyes

bulge, and tongue protrudes

Nursing diagnosis

Ineffective breathing **related to** respiratory tract obstruction

Management

Suctioning of secretion

Increased oxygen intake and humidity

Adequate fluids

Intensive care and mechanical ventilation

if needed for infants <6 months

Nursing diagnosis

Fluid volume deficit **related to** frequent vomiting

management

Rebalance of fluid by intravenous administration

Encourage oral fluids; offer small

amount of fluids frequently.

position infant on side

to decrease chance of aspiration

with vomiting.

Chicken pox

Agents—Varicella-zoster virus

Transmissions—Direct contact, droplet (airborne)

Incubation period, usually 14-16 days

infectious period

Probably 1 day before eruption of lesions to

6 days after first crop of

vesicles when crusts have formed

Signs and symptoms

rash highly pruritic; begins as

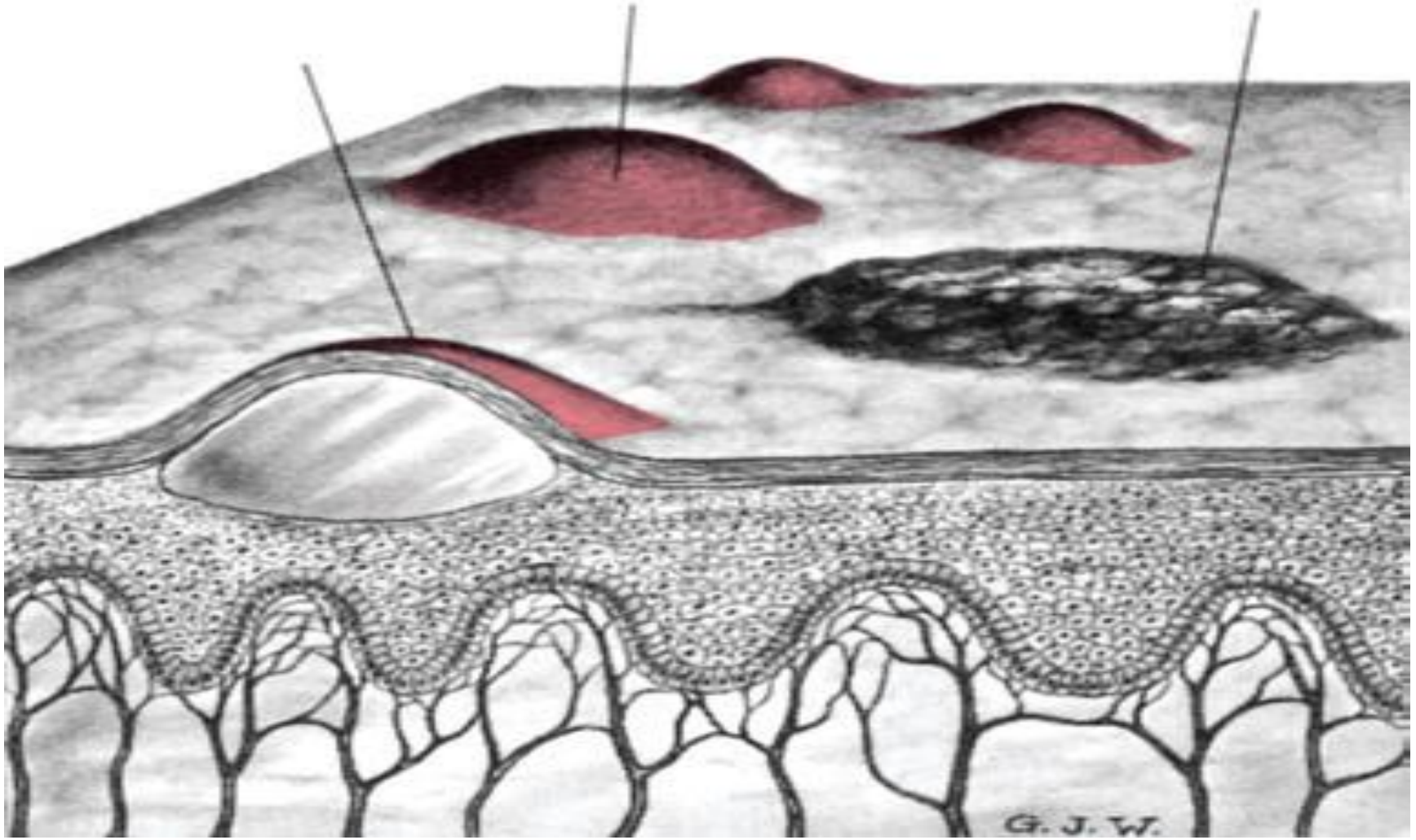
Macule → papule → vesicle

This vesicle breaks easily and forms **crusts**

Spread on face and a proximal extremities

Spread on distal limbs

and less on areas not exposed to heat


G. J. W.