


Literature Review: Ramsay Hunt Syndrome As A Complication Of Herpes Zoster Disease

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Article Info	ABSTRACT
<p>Keywords: Ramsay Hunt syndrome, Herpes Zoster, Varicella Zoster Virus (VZV)</p>	<p>Ramsay Hunt syndrome as a complication of herpes zoster, mostly occurs in immunocompromised patients. Disruption of the immune system plays a role in the reactivation of Varicella Zoster Virus (VZV). After primary varicella infection, VZV remains and is latent in the dorsal sensory ganglion roots. Then, several decades later, this neurotropic virus can reactivate and cause shingles. Ramsay Hunt syndrome is characterized by a triad of facial paralysis, ipsilateral ear pain/otalgia accompanied by facial paralysis, and the appearance of vesicle lesions in the ear according to the dermatome of the facial nerve. The purpose of this study was to determine Ramsay Hunt Syndrome as a complication of Herpes Zoster based on immunity, VZV latency period, age, gender, clinical manifestations, and management. This study used a literature review method with a Narrative Review design. The results obtained 15 journals that included inclusion criteria, namely references in the last 5 years, according to keywords, from scientific journal references, and case report research designs. The results showed that the influence of the immune system plays a major role in the reactivation of VZV, especially in elderly patients because old age causes functional changes in T cells and monocytes that function as a defense against viruses causing VZV reactivation, so Ramsay Hunt syndrome is rarely found in children <6 years. The presence of other risk factors such as a history of malignant lymphoma, HIV infection, history of immunosuppressive therapy, history of chronic disease, history of use of immunosuppressive drugs, or history of habits (consuming alcohol) can be the cause of reactivation of Varicella Zoster Virus (VZV).</p>
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INTRODUCTION

Herpes zoster is localized dermatomal disease, characterized by with painful unilateral radicular and eruption vesicular in accordance dermatome. Herpes zoster is caused by reactivation from latent infection of varicella zoster virus (VZV) in the sensory ganglion. Herpes zoster in Indonesia is the most common found at age >45 years.^{1,2}

Incidence this herpes zoster disease Alone range between 1.2 - 3.4 per 1000 people per year among individual young healthy, while the incident increase to 3.9 to 11.8 per 1000 people per year among patients aged more from 65 years. Further studies specific other

mention that in the Asia-Pacific region the incidence of herpes zoster is estimated at 3-10 per 1000 people of all ages.³

According to Forbes et al (2021), complications from Herpes Zoster, namely 0.37% for Ramsay Hunt syndrome, 0.01% for *disseminated zoster*/spreading zoster, 0.04% mortality due to zoster, for complications other, risks that can occur attributed is 0.48% for complications neurological, 1.33% for complications ocular, 0.29% for complications skin and 0.78% for complications visceral. The risks that can attributed more high among patients > 50 years.^{4,5}

According to Nikolaos et al (2024), complications of the most herpes zoster cause complications neurological Then followed complications ocular and cutaneous. Complications neurologic most is 2.6-46.7% for postherpetic neuralgia and 1.4-1.7% for Ramsay Hunt syndrome, 1.4-15.9% for complications ocular, 0.3-8.2% for *disseminated zoster*/the most common type of zoster cause cutaneous complications.^{5,6,7}

Recovery prognosis Ramsay Hunt syndrome is also affected accuracy in early diagnosis. *Early diagnosis* can stop more complications continue, one of them degeneration chronicle facial nerve.^{6,8,9}

Ramsay Hunt Syndrome is paralysis nerve the face that appears as complications end herpes zoster infection. Primary infection by the varicella zoster virus manifests as fever with rash vesicular spreading. After primary infection, the varicella zoster virus remains No active /latent in sensory ganglia trigeminal root and dorsal body. Reactivation of the virus causes herpes zoster reaction, when lesi nerve reactivation located along the geniculate ganglion of the nerve face (CN VII), group symptom called Ramsay Hunt syndrome.^{10,11,12}

Ramsay Hunt Syndrome more Lots found in patients *immunocompromised* in other words in patients who experience decline system immune, prone to have a more advanced disease process severe and less recovery complete. Risk factors from reactivation *Varicella-Zoster Virus (VZV)* latent phase is very influenced from immunity factors.^{11,13,14,15}

METHOD

Study This use method *Literature Review* with design *Narrative Review*. Narrative review method for identify and summarize articles that have been published previously, avoid duplication research, and search field studies new that has not been researched. The research flow carried out in writing thesis for the narrative review model, namely started from determination topic, search literature based on article database related, selection literature, data processing and conclusions.

The purpose of this study was to determine Ramsay Hunt Syndrome as a Complication of Herpes Zoster by identifying it in terms of immunity, latency period of Varicella-Zoster Virus (VZV), age, gender, clinical manifestations, and patient management in each article reviewed. Inclusion criteria: research articles with publication years 2019 - 2024, according to keywords, articles can be fully accessed, articles come from references to scientific journals/ *electronic based journals*, and articles have a *case report research design*. Exclusion criteria: paid articles and do not match keywords.

RESULTS

Based on results search 15 articles found from keyword search “ syndrome ” ramsay hunt as complications of herpes zoster”. All journal entered in search and filtering. Then researcher perform screening on title and abstract from article, in the end found 15 remaining articles that match with criteria next inclusion will used for this literature review.

Synthesis Results

No	Author / Year	Research Title	Method	Outcomes
1	Divya Amaravadi, Reshma K. Parvathalu, Sunayana K. Ravinder (2024)	Ramsay hunt syndrome : a case report	case report	<ul style="list-style-type: none"> • Yashoda Hospital Hyderabad in India with complaints of paralysis face right, mouth shifted to the left side since 2 days and history of fluid coming out of the right ear accompanied by pain since one week. • Journal This say symptom <i>Ramsay Hunt Syndrome</i> usually appear in a number of day until a number of Sunday after the emergence <i>herpes zoster</i>. • In the journal This report patient experience repair symptoms on the 3rd day after given Valacyclovir 1000 mg, Acyclovir ointment, Prednisolone 60 mg, Ceftriaxone for infection secondary, and Paracetamol or Diclofenac sodium.
2	Vedant M. Dhatrak, Swapnil Mohod, Sourabh B. Shinde, Vikrant V. Jadhav (2024)	Ramsay Hunt Syndrome : A Rare Complication of Herpes Zoster Infection With an Incidental Finding of Submandibular Hemangioma	case report	<ul style="list-style-type: none"> • 73 -year- old female patient was admitted to Sharad Pawar Dental College and Hospital in India with complaints of pain like burning on the left cheek lower since 4 days then, it looks face No symmetrical Because swelling diffuse on the side left jaw bottom, corner mouth left seen decreased, and the patient No can close eye left. • Journal This say symptom <i>Ramsay Hunt Syndrome</i> usually appear in 1-3 weeks after the emergence reactivation of <i>Varicella zoster</i> virus, condition This known as herpes zoster oticus,

				<ul style="list-style-type: none"> • In the journal This report patient experience repair significant after given corticosteroids intravenous (prednisone) and Acyclovir for 7 days
3	<p>Vasco Carvalho, Sofia Martins (2021)</p>	<p>Ramsay hunt syndrome : Case report</p>	<p>case report</p>	<ul style="list-style-type: none"> • An 11-year-old girl presented to the emergency department of Hospital de Braga in Portugal with paralysis. face side Right (<i>House-Brackmann Facial Nerve Grading Scale = V</i>) history of nausea, vomiting, and headache since 2 days then. Her medical history includes a chickenpox infection at age 5. • Journal This say emergence symptom <i>Ramsay Hunt Syndrome</i> in a short onset consequence from reactivation from <i>the Varicella zoster virus</i> in the geniculate ganglion • In the journal This patient given oral prednisolone 60 mg/ day for 5 days and intravenous Acyclovir for 10 days • Journal This say that giving prednisolone and Acyclovir in 3 days First after appear symptom can improve prognosis and accelerate recovery.
4	<p>Naoyuki Matsumoto, Makiko Toma- Hiranoa, Takuya Yasuia, Ken Itoa (2023)</p>	<p>Disseminated herpes zoster in an immunocompetent young adult: A rare complication of Ramsay Hunt syndrome</p>	<p>case report</p>	<ul style="list-style-type: none"> • A 16-year-old boy came to the emergency department with weakness. face side left (<i>House-Brackmann Facial Nerve Grading Scale grade III</i>) accompanied by decline hearing since 1 day then, Three days previously, the patient experienced left otalgia and rotating vertigo. History of being affected smallpox 2018. • Journal This say emergence symptom <i>Ramsay Hunt Syndrome</i> is accompanied with Herpes Zoster spread onset between 1-11 days followed with <i>facial palsy</i> • In the journal This patient given intravenous Acyclovir or oral

				<p>famciclovir, intravenous steroids (prednisolone)</p> <ul style="list-style-type: none"> Journal This say that patient show repair function face, reaching House-Brackmann Grade II on the 26th day and Grade I on the 52nd day since the emergence symptom.
5	Manish Gupta, Monica Gupta, Akanksha Gupta (2022)	Ramsay Hunt syndrome with cranial polyneuropathy	case report	<ul style="list-style-type: none"> A 65- year -old man with complaint ear pain right, change sound, difficulty swallowing, and deviation mouth to side left, and No can close eye right for 10 days. He also complained lost hearing in the ear right accompanied by sensation spinning in the head and tendency fall moment walking. History of suffering smallpox during childhood Journal This say symptom <i>Ramsay Hunt Syndrome</i> can happen a number of year after first varicella infection. Duration emergence symptom can varies In the journal This patient was given oral valacyclovir 1000 mg, oral prednisolone 60 mg, acyclovir ointment, and the patient experience repair after 2 months treatment
6	Ashwini Sarathy, Clemens An, Mirabelle Sajisevi, William Brundage (2023)	A Case Report of Refractory Postherpetic Neuralgia After Ramsay Hunt Syndrome Treated With Tympanic Nerve Neurectomy	case report	<ul style="list-style-type: none"> A 45 year old woman came come to the ENT polyclinic with complaint sharp, shooting pain, like burning, stabbing, and throbbing. He state that painful the getting worse moment eating, talking, or do movement face whatever. History of suffering from <i>Ramsay Hunt Syndrome</i> 10 years Then with symptom painful ear right, paralysis face side right accompanied by change vision side right. Journal This say generally symptom <i>Postherpetic Neuralgia</i> as sequel from <i>Ramsay Hunt Syndrome</i> in the form of painful persistent 3 months since the

				<p>onset of herpes zoster. However, in cases This patient feel painful persistent with 9 years duration</p> <ul style="list-style-type: none"> • In the journal This patient given Valacyclovir, Prednisone, as well management painful For Treatment for post- herpetic neuralgia includes gabapentin, carbamazepine, and injections. botulinum toxin, • In the journal This patient given action myringotomy diagnostic with application topical lidocaine on the tympanic nerve which produces repair temporary. • In the journal This patient experienced significant pain reduction after the tympanic neurectomy procedure.
7	<p>Ennaciri Mohamed Amine, El Khaoua Sakina, Baba Rime, Zemmez Youssef, El Amraoui Mohamed, Frikh Rachid, Hjira Naoufal (2024)</p>	<p>An Atypical Ramsay Hunt Syndrome : Case Report</p>	<p>case report</p>	<ul style="list-style-type: none"> • A 40 year old man came with complaint weakness face side right accompanied by lesi vesiculopustular area retroauricular right. Without symptom otologic or vestibular • Journal This say <i>varicella-zoster</i> virus reactivation can happen When just after period dormancy, which can in progress from a number of year until a number of decade after infection beginning • In the journal This patient No mentioned duration specific duration of administration therapy. Patient given antivirals, corticosteroids intravenous, and sessions rehabilitation neuromuscular face
8	<p>Hernandi Sevira Princess Trianing, Titian Rakhma (2022)</p>	<p>Syndrome : Report Case</p>	<p>case report</p>	<ul style="list-style-type: none"> • A 74 -year- old man presented to the emergency department with weakness. face side right since 1 mg ago, 2 weeks previously arise lesi vesicle spread from face side right until behind neck, accompanied by ear buzzing, pain prickly and hot.

			<ul style="list-style-type: none"> • Journal This say symptom <i>Ramsay Hunt Syndrome</i> usually appear in 2 weeks after symptom <i>shingles</i> appear. • In the journal This patient given gabapentin 300 mg 2x1, prednisone 5 mg 3x4, acyclovir ointment 2x1. Symptoms get better after 5 days treatment.
9	<p>Made Ayu Dessy Dwitasari, Urges Made Cittarasm Saraswati Seputra (2023)</p>	<p>Ramsay hunt syndrome : a case report</p> <p>case report</p>	<ul style="list-style-type: none"> • A 67 -year- old woman came to the emergency department with complaints eruption vesicular on the face adjacent left and ear left since 2 days then, pain burning on cheeks and ears left not enough more than 4 days previously. The patient also complained weakness face on the side left, pain ear left, tinnitus, and decreased hearing in the ear left. Complaints This is also accompanied by vertigo, nausea, and vomiting. History of being exposed to varicella at the time children • Journal This say <i>Varicella zoster</i> virus reactivation is common found in patients <i>immunocompetent</i> and <i>immunocompromised</i>, in cases this is what it becomes factor risk is age and history hypertension since 20 years Then. • In the journal This patient given oral acyclovir 4x800 mg, acyclovir Topical 3 times a day, betahistine 2x12 mg, flunarizine 1x5 mg, paracetamol 3x650 mg, mecobalamin 2x500 mg, intravenous diphenhydramine 10 mg for 7 days and experienced repair symptom hearing start get better. • In the journal This said 67.3% of patients were treated <72 hours since symptom appear have a prognosis of complete recovery compared to patients being

				treated more from 7 days since symptom appear.
10	Ghofran M Hamouda, Yousif I Eltoham, Ahmed Altayeb, Abusofyan Salih and Ahmed M Suleiman (2020)	Ramsay Hunt Syndrome : Case Presentation and Management	case report	<ul style="list-style-type: none"> • A 24- year- old man came to the emergency department complaining of looks multiple crusted lesions spread spread throughout distribution of the mandibular division of the trigeminal nerve in the area infraorbital side face right spread accompanied by painful up to inside mouth, tinnitus, weakness on one side face right, tachycardia, hypoglycemic with pressure blood low and accompanied fever • In the journal This patient given resuscitation fluids, antibiotics (for remove infection) and antiviral (acyclovir 800 mg/five times a day) as governance beginning, after That therapy patient to be continued through the ENT polyclinic given prednisolone 25 mg for 2 weeks Then <i>taper off</i> to 15 mg for 5 days Then reduced by 5 mg given each day until symptom get better • In the journal This say giving oral prednisone, intravenous acyclovir or orally for 3 days after onset appears provide a prognosis of total/ complete recovery for patient
11	Ilknur Eninanç, Busra Sahin (2023)	Ramsay Hunt Syndrome with Oral Findings : A Rare Case	case report	<ul style="list-style-type: none"> • A 60 -year- old man came to the emergency department with complaints eruption vesicular and crusted local seen on the leaves ear right, preauricular area, canal hearing external and regional zygomatic in part right head and sides right jaw below, found Lots lesi vesicular inside mouth. Patient limited in move tongue. Patient history smoking and DM do not controlled • In the journal This say existence history disease chronicles that affect decline immune such as DM, HT, or history use drug <i>immunosuppressive</i>

			<p>can become reason <i>Varicella zoster</i> virus reactivation</p> <ul style="list-style-type: none"> • In the journal This mention symptom weakness in the face arise 2-3 days after the onset of herpes zoster. • Journal This said 46.5% of facial weakness appear simultaneously with symptom lesi vesicles on the ears, 34.2% facial weakness appear more outside from symptom lesi vesicles in the ear, 19.3% of symptoms lesi vesicles on the ear more outside from weakness in the face • In the journal This patient given oral valacyclovir 1 gr, oral dexamethasone 1 gr, vit b 1; B 6; B12, and insulin therapy. Lesions on the face and mouth start get better after 2 days therapy
12	<p>Wissam Al Rida Ayoub, Abdul Rahman Shatila, Dina Lizzeik, Jana Berro, Sami Faddoul, Mohamad El Dassouki, Moussa A. Chalah, Samar S. Ayache (2023)</p>	<p>Ramsay Hunt Syndrome in Asymptomatic COVID-19 Infection : A Case Report and a Literature Reviews</p>	<p>case report</p> <ul style="list-style-type: none"> • A 60 -year- old man came to the emergency department complaining of oral paresthesia, changes in taste sensation (dysgeusia), weakness face right, and lesion crust multiple on one side right face, in the periauricular and perioral areas to neck right since five days Then. History of varicella during childhood • In the journal This patient experience repair symptom after 2 months given valacyclovir 1000 mg PO three times daily together with prednisone 1 mg/kg/ day PO for 10 days for five days Then reduced in a way gradually for 10 days • Journal This say COVID-19 infection can cause a number of complications neurological including neuropathy. Infection secondary from COVID-19 can become reason reactivation of latent herpes viruses e.g <i>Varicella zoster</i>
13	<p>Siqi Dai, Xiaowen</p>	<p>Bilateral asymmetrical herpes- zoster with</p>	<p>case report</p> <ul style="list-style-type: none"> • A 60 -year- old man came to the emergency department with

Huang, Yuxiang Chen, Menglei Wang, Huanxin Zheng, Kang Zeng and Li Li (2020)	Ramsay hunt syndrome in an d immunocompetence adult	complaints erythema spread and vesicles gathered on the left chest and ear right accompanied by painful sensation burned. One week previously, some vesicle appear after drink alcohol. The patient's face No symmetrical with corner drooping mouth right, right nasolabial fold become flat, and the petals eye right No Can closed perfect <ul style="list-style-type: none"> • In the journal This patient given penciclovir 250 mg twice with infusion and methylprednisolone 40 mg once a day. Pain reliever with oral gabapentin. Skin lesions patient get better after 1 week treatment • Journal This say history drink alcohol and history disease chronic cause defense immune decrease the result play a role important in the emergence varicella virus reactivation.
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Discussion

Ramsay Syndrome Hunt is a complication due to reactivation of *the varicella virus zoster* in the cranial nerves or dorsal root ganglia distribution. Reactivation can occur anywhere along the dermatomes of the body, but if it involves facial paralysis, thing This identified as Ramsay syndrome Hunt.^{16,17,18}

In general clinical usually Ramsay Syndrome Hunt identified with trias that is *facial paralysis*, ear pain /otalgia ipsilateral accompanied by facial paralysis, and arises lesi vesicle in the ear until mouth due to reactivation along the dermatome facial nerve. Due to the proximity of the facial nerve to the vestibulocochlear nerve, patients may also experience symptoms of tinnitus and vertigo.^{19,20,21,22}

The most significant prognostic indicator of Ramsay syndrome Hunt is the severity of the facial paralysis side. One of the residual symptoms of Ramsay syndrome The most debilitating form of Hunt's disease is postherpetic neuralgia. Neuroalgia Postherpetic is defined as persistent pain 3 months after the onset of herpes zoster virus.^{16,18}

Ramsay Syndrome Hunt usually heals on its own; however, the rate of recovery can vary between patients, depending on from system immune patients. There are many factor the risk that becomes reason reactivation of Varicella-zoster virus (VZV) which will result in Ramsay Syndrome Hunt, among others is :

Immunity

Risk factors Varicella-zoster virus (VZV) reactivation is existence *immunocompromised* especially those that affect immunity T- cells, for example own history HIV infection, history

disease lymphoproliferative, history recipient organ transplant, and history cancer under chemotherapy. Complications of herpes zoster are also more often occurs in patients cancer than in healthy people (*immunocompetent*). VZV reactivation is more common in patients with malignancy hematologist than in those with solid tumors.^{23,24,25,26}

In the journal Ilknur Eninac et al (2023) said existence history disease chronicles that affect decline immune like DM, HT, or history use drug immunosuppressive can become reason reactivation of Varicella zoster virus. In the journal Siqi Dai et al (2020) said history drink alcohol and history disease systemic chronic cause defense immune decrease the result play a role important in the emergence varicella virus reactivation.

In the journal Hernandi Sevira et al (2022), they discuss the risk factors that can cause reactivation. VZV is a decrease in cell-mediated immunity. immunity) due to history of carcinoma, radiation therapy, chemotherapy or HIV infection. In the journal Made Ayu et al (2023), it mentions Ramsay Syndrome Hunt is closely related to immune status, therefore this syndrome is more often seen in the elderly, patients with acute or chronic diseases, malignancies, and other conditions that reduce cellular immunity. In this case, the 67-year-old patient VZV reactivation is likely due to the weakening of the immune system associated with the patient's old age and chronic diseases.

In the journal of Wissam Al Rida Ayoub et al (2023), there is history disease is one of them is COVID-19 infection can cause a number of complications neurological including neuropathy. Infection secondary from COVID-19 can become reason reactivation of latent herpes viruses, for example Varicella zoster.

Based on theory on patients with healthy immune system (*immunocompetent*), antibodies specific (IgG, IgM, and IgA) appear more fast and achieve higher titers tall during reactivation (herpes zoster) vs. during primary infection so that cause immunity long lasting and enhancing mobile defense body to varicella-zoster virus infection^{13,25}. If the level antibody This high (IgG, IgM, and IgA), the virus remains neutralized, but If immunity reduced, active virus return develop breed on the skin sensitive which causes lesi characteristics of herpes zoster.^{23,25}

This matter in line with theory, based on *literature* that has been reviewed, partly big *literature* reports patient Ramsay Syndrome Hunt most found in patients age further and in patients with history disease system chronic DM, HT, history cancer, or history use drug immunosuppressive which results in decline system immune so that make it easier the occurrence reactivation of Varicella -zoster virus (VZV).

In addition, from reviewed *literature*, patients Ramsay Syndrome Hunt a number of found in patients with history drink alcohol that can cause defense immune decreased. As a result play a role important in the emergence reactivation of varicella virus with effect complications caused can more critical in connection with existence decline system immune.

Latency period Varicella-zoster virus (VZV)

Latency period Varicella-zoster virus (VZV) is caused by the immune response immune specific body against VZV. Whenever control of the virus is disrupted, either Because aging process or history *immunocompromised* (eg. There is history lymphoma malignant, HIV infection, or history therapy immunosuppressive) so that resulting in VZV being able to with

easy replicate back. Furthermore, reactivation of the virus causes inflammation and necrosis in one or more ganglia are affected.⁷

After primary varicella infection, persistent and deep latent VZV dorsal sensory ganglion root. Then a number of decade, neurotropic virus This can experience reactivation and causes herpes zoster which is mark with eruption painful unilateral vesicles, typical his follow dermatome sensory nerves^{16,17,18}. There are many related factors with VZV reactivation including immunity body, history disease, age, etc. This is is what affects the VZV latency period up to cause reactivation.^{18,19}

In the journal Divya Amaravadi et al (2024), it says Ramsay Hunt Syndrome symptoms are usually appear in a number of day until a number of Sunday after the emergence of herpes zoster. In the journal Vedant M Dhatrak et al (2024), it says Ramsay Hunt Syndrome symptoms are usually appear in 1-3 weeks after the emergence reactivation of Varicella zoster virus, condition This known as herpes zoster oticus.

In the journal Naoyuki Matsumoto et al (2023) said emergence Ramsay Hunt Syndrome symptoms accompanied by with Herpes Zoster spread onset between 1-11 days followed with facial palsy. In the journal Manish Gupta et al (2022), it says Symptoms of Ramsay Hunt Syndrome can happen a number of year after first varicella infection. Duration emergence symptom can varies.

In the journal Ashwini Sarathy et al (2023), it says Postherpetic Neuralgia symptoms as sequel from Ramsay Hunt Syndrome in the form of painful persistent 3 months since the onset of herpes zoster. However, in cases This patient feel painful persistent with 9 years duration since the onset of herpes zoster. In the journal Ennacin Mohamed et al (2024) said reactivation of the varicella-zoster virus can happen When just after period dormancy, which can in progress from a number of year until a number of decade after infection beginning.

In the journal Hernandi Sevita et al (2022), said Ramsay Hunt Syndrome symptoms are usually appear in 2 weeks after symptoms of herpes zoster appear. In the journal Ilknur Eninanc et al (2023), it says mention symptom weakness in the face arise 2-3 days after the onset of herpes zoster. In Reza Sabouri (2024, says lesi skin as symptoms of herpes zoster can appear simultaneously with symptom neurological, but time specific emergence lesi skin can varies between individual. However, in case this, lesion skin appear in time near after symptom beginning.

Based on theory, latency period from Varicella-zoster virus (VZV) since primary infection to the emergence reactivation at every individual different. This is influenced by factors immunity each individual^{18,19}. This matter in line with theory, based on *literature* that has been reviewed, partly big Ramsay Hunt Syndrome symptoms are usually appear a number of day until a number of Sunday after the emergence reactivation from the varicella virus. Based on *literature* that has been examined, the latency period of the varicella virus is the fastest until cause Ramsay Hunt Syndrome symptoms 2-3 days after the onset of herpes zoster (Reza S, 2024) and the longest latency period of varicella virus with 9 years duration since the onset of herpes zoster until the emergence of Postherpetic Neuralgia as sequel of Ramsay Hunt Syndrome (Ashwini et al, 2023).

Age

Herpes zoster has high incidence in patients with age more and more found accompanied by complications neurological involving facial nerve²⁷. Although moment This treatment of herpes zoster and Ramsay Hunt Syndrome is adequate, however damage neurological permanent still Possible happened. So that moment this is in Europe, the guidelines varicella vaccination recommended For to vaccinate patient at risk high, like patient carry on age or patient with disturbance immunity.¹⁰

In the journal Naoyuki et al (2023), reported patient 16 year old boy suffering from Ramsay Hunt Syndrome with history healthy immunity (*immunocompetent*). This is is rare case found. Until 2023, only there are 3 cases Ramsay Hunt Syndrome patients found in patients with history healthy immunity (immunocompetent). *However*, in cases This No PCR (*polymerase-chain-reaction*) testing was performed on varicella virus DNA to establish a definite diagnosis. In the journal this is a diagnosis only based on symptom clinical.

Wissam Al Rida Ayoub's journal et al (2023), This disease usually occurs in people aged between 60 and 80 years, but can also affect people aged between 19 and 89 years. From the case The report in the journal was a 60-year-old patient, where the patient is at increased risk of herpes zoster manifestation.

Based on theory, age furthermore affects the system immune, namely influence Leukocyte activity including macrophages, monocytes, neutrophils, and eosinophils. The occurrence of functional changes in T cells and monocytes that function as defense against viruses causes easy reactivation virus is back thus causing shingles until arise Ramsay Hunt Syndrome complications.^{1,2}

This matter in line with theory, based on *literature* that has been reviewed, partly big Ramsay Hunt Syndrome sufferers were found in patients with age on than 60 years and is rarely found in children under 6 years of age. Based on *literature* that has been reviewed, age youngest patient Ramsay Hunt Syndrome sufferers are found in males which 16 year old is this is case rare Because patient including in group with healthy immunity / immunocompetent (Naoyuki et al, 2023), whereas age the oldest patient Ramsay Hunt Syndrome sufferers are found in males age 74 years (Hernandi et al, 2022).

Gender

Based on the journal Made Ayu Dessy Dwitasari et al (2023), the incidence of RHS is 2.2 cases per 100,000 population with a predilection for the same sex. In this case The report states that the patient is a woman, but is not included in the risk factors for Ramsay syndrome. hunt. In the journal Ghofran M Hamouda et al (2020), the incidence of RHS is 5/100,000 people and most of the affected patients are in the age group (20-30) years without gender prediction.

Based on theory, part big say prevalence Ramsay Hunt Syndrome case based on type sex own same predilection.¹¹ Based on *literature* that has been reviewed, partly big Ramsay Hunt Syndrome sufferers were found in patients with type sex man compared to women. Based on *literature* that has been reviewed, from 15 *literatures*, 7 *literatures* were found with Ramsay Hunt Syndrome patients are of the type sex women, while there are 8 *literatures* with Ramsay Hunt Syndrome patients are of the type sex man.

Manifestation Clinical

In some parts big patient, diagnosis is established in a way clinical. However existence presentation varied clinical and non - specific cases Typically, the diagnosis of Herpes zoster may be difficult on some patient. Need PCR (*polymerase-chain-reaction*) test was performed on varicella virus DNA for a more definite diagnosis. ^{8,11}

In the journal Hernandi Sevira Trianing Putri et al (2022), in patients This vesicle arise since 2 weeks ago new then 1 week ago appear weakness in the face adjacent right vestibular. Beside That although the patient also complained decrease hearing, on test hearing with use tuning fork obtained sensorineural deafness. In patients This obtained asymmetry face, paresis nerve facialist that causes decline corner unilateral mouth, wrinkles forehead the right one is missing as well as existence left nasolabial fold, no looks existence abnormal movements such as facial tics, grimacing, tetanus/ rhisus sardonicus seizures, and tremors. Left eyebrow more tall from eyebrows right when second eyebrows raised, when patient close eye so both of them become asymmetry. When the petals eye opened obtained eye left more strong. When the patient smile side adjacent right No can interesting corner lips.

In Made Ayu Dessy's journal Dwitasari et al (2023) stated prodromal symptoms include fever, sick headache, pain, and paresthesia in the affected dermatome. Possible is symptom First before emergence manifestation typical of RHS. The prodromal period lasts 1-3 days. Patients also complain of vertigo, tinnitus, nausea, and vomiting, which indicate existence injury vestibulocochlear nerve.

In the journal Ghofran M Hamouda et al (2020), in patients This looks vesiculation and ulceration of the ear outer and ipsilateral anterior two- thirds of the tongue and palate soft accompanied by paralysis ipsilateral face. In patients the come with complaint pain, wound burn multiple inside his mouth and hardening skin in the examination area for 5 days, starting with vesicle Then broken after three day expand to ears and limited only on the side right. On examination extra oral available area scattered crusts throughout distribution of the mandibular division of the trigeminal nerve in the area infraorbital right.

In the journal Ilknur Eninanç et al (2023), in the case this is the first time this has happened that is Sick ear, lesion vesicular inside mouth appear a number of day after eruption around ears. Twelve day after the emergence eruption around ear, paralysis face occurs on the same side, even though valacyclovir used. Occurrence paralysis after eruption vesicular is sign good prognostic, and use antiviral drugs may be postpone paralysis face and reduce paralysis face House-Brackmann level. In addition, except lesi vesicular, patient only feel pain in the eyes moment experiencing otalgia and paralysis face. However patient No experience disturbance hearing and vertigo.

In the journal Wissam Al Rida Ayoub et al (2023), it was stated in patients first time experiencing change the sensation of taste that he describe as a sour taste. Three days then, it appears rash red old in mucosa buccal. Patient Then come to the emergency unit emergency with weakness face right up and down (difficulty close eyes and trouble smiling) which shows paralysis nerve face peripheral. He has lesi crust multiple on one side right face, in the periauricular and perioral areas in the distribution of V3, and also in the right anterior neck on.

In the journal Siqi Dai et al (2020), in the case the patient come with complaint erythema spread and vesicles gathered on the left chest and ear right. One week previously, some vesicle appear after drink alcohol. Typical neuropathic pain, such as sensation burning, pain like shock, pain prickling, and a feeling of numbness, accompanied with rash. On the days next, it happens asymmetry face of the patient this, and the patient experience exudate in the canal ear right. The patient's face No symmetrical with corner drooping mouth right, right nasolabial fold become flat, and the petals eye right No Can closed perfect.

In the journal Ennaciri Mohamed Amine et al (2024), in with complaint weakness face side right accompanied by lesi vesiculopustular area retroauricular right. Without symptom otologic or vestibular, so that called as case atypical ramsah hunt syndrome. Atypical Ramsay Hunt Syndrome refers to variations from syndrome this is not show trias symptom classic.

Governance

In the journal Divya Amaravasi et al (2024), reported patient experience repair symptoms on the 3rd day after given Valacyclovir 1000 mg, Acyclovir ointment, Prednisolone 60 mg, Ceftriaxone for infection secondary, and Paracetamol or Diclofenac sodium. In the journal Vasco Carvalho (2021), said that giving prednisolone and Acyclovir in 3 days First after appear symptom can improve prognosis and accelerate recovery.

In Imane Ouhbi's journal et al., treatment combination with anti-viral agents and steroids are recommended For RHS treatment. Dosage Parenteral acyclovir is 15 mg/kg per day and the oral dose is 800 mg 4 times a day. In cases the patient treated with intravenous steroids (prednisolone 1mg/kg per day) with antivirals (acyclovir 15mg/kg per day) and antalgics.

In the journal Ashwini Sarathy et al (2023), in the journal This patient Already experiencing Postherpetic Neuralgia as sequel from Ramsay Hunt Syndrome so patient complain about painful persistent that is not get better after given Valacyclovir, Prednisone, as well management painful For Treatment for post- herpetic neuralgia includes gabapentin, carbamazepine, and injections. botulinum toxin. So that patient under consideration done action myringotomy diagnostic with application topical lidocaine on the tympanic nerve which produces repair while. Patient experience subtraction significant pain after done procedure *tympanic neurectomy*.

In Made Ayu Dessy's journal Dwitasari et al (2023), Therapy standard for Ramsay Hunt Syndrome is combination of antivirals and corticosteroids. Antivirals have been proven beneficial For reduce virus replication, accelerate resolution rash, and reduce intensity and duration pain. Recommended antiviral regimen is acyclovir 4x800, famciclovir 3x500 mg, or valacyclovir 3x1000 mg. Parenteral acyclovir with a dose of 15mg/kg per day can also be used given without significant difference with oral regimen. Corticosteroids is drug anti-inflammatory used For speed up facial paresis healing with reduce inflammation and edema of the nerves. In the journal This said 67.3% of patients were treated <72 hours since symptom appear have a prognosis of complete recovery compared to patients being treated more from 7 days since symptom appear.

Based on journal Ghofran M Hamouda et al (2020), from do research review previously with modality different treatments, in the journal the recommend use combination of antiviral

and steroids as modality treatment main. In the journal This patient given resuscitation fluids, antibiotics (for remove infection) and antiviral (acyclovir 800 mg/five times a day) as governance beginning, after That therapy patient to be continued through the ENT polyclinic given prednisolone 25 mg for 2 weeks Then tapering off to 15 mg over 5 days Then reduced by 5 mg given each day until symptom get better

In the journal Ilknur Eninanç et al (2023), in the case this, steroid therapy was started as addition to valacyclovir antiviral therapy before paralysis face, and therapy antibiotics group nonsteroidal anti-inflammatory drugs, vitamin B, and ciprofloxacin were given. in combination. The above research show that level complete healing far away more low in cases with delayed treatment. Therapy oral valacyclovir 1g (3x1) was started and given for 7 days. First, the dose corticosteroids previously (dexamethasone 1 g, 3 times a day 1 tablet) was increased, and then vitamins B1, B6, B12 (1 g, 1 tablet once a day) and drugs nonsteroidal anti-inflammatory drugs.

In the journal Siqi Dai et al (2020), antiviral therapy is needed For treating HZ, and the use of glucocorticoids in a way early Possible useful in reduce swelling and relief inflammation nerves. A studies retrospective show that therapy antiviral- glucocorticoid combination can increase level recovery paralysis face. Patient given penciclovir treatment 250 mg twice with infusion and methylprednisolone 40 mg once a day. Pain reliever with oral gabapentin and super laser irradiation.

In the journal Danny Silva et al (2024), Danny Silva's management effective given combination Methylprednisolone 500 mg daily -1, 250 mg days 2 and 3, then 100 mg for 4 days, associated with Acyclovir 400 mg 5 times for 7 days. Options furthermore There is combination Prednisone 1 mg/ kgBW for 7 days, in gradually reduced by 10 mg to reached 0, followed by Acyclovir 200 mg 5 times a day for 21 days, or choice furthermore valacyclovir 1 g three times a day for 7 days.

Based on theory, administration of antivirals specific aiming For block replication of viral DNA in affected cells impact infection. Administration corticosteroids as drug anti-inflammatory aiming For speed up healing weakness /paresis of the face with reduce inflammation and edema of the nerves^{8,11}. Based on theory, speed giving treatment since early <72 hours after emergence symptom have a better prognosis good. As many as 67.3% of patients were treated <72 hours since symptom appear have a prognosis of complete recovery compared to patients being treated more from 7 days since symptom appear.^{11,25}

Based on *literature* that has been reviewed, almost all *literature* reports governance patient with giving combination antiviral drugs and corticosteroids, in addition it is also given other drugs based on symptom accompanying (management) symptomatic). Based on *literature* that has been reviewed, there is 1 *literature* that provides governance action surgery, in *the literature* the report Postherpetic Neuralgia patients as sequel from Ramsay Hunt Syndrome, so patient under consideration done action myringotomy diagnostic with application topical lidocaine on the tympanic nerve which produces repair while. Patient experience subtraction significant pain after done procedure *tympanic neurectomy*.

CONCLUSION

In the literature results review, 15 journals were found discussing Ramsay Syndrome Hunt as a Complication of Herpes Zoster by identifying in terms of immunity, latency period of Varicella-Zoster Virus (VZV), age, gender, clinical manifestations, and patient management in each article reviewed. It can be concluded from a number of *literature* above say, f risk actor Reactivation of Varicella-zoster virus (VZV) is highly influenced by the immune system. In patients with history *immunocompromised conditions* that affect T-cell immunity, for example having a history of HIV infection, a history of lymphoproliferative disease, a history of receiving an organ transplant, a history of cancer under chemotherapy, a history of using *immunosuppressive* drugs, or a history of habits (consuming alcohol) can be the cause of reactivation of the Varicella virus. shingles. It can be concluded, based on clinical findings, 46.5% of facial weakness appeared together with symptoms of vesicle lesions on the ear, 34.2% of facial weakness appeared more than symptoms of vesicle lesions on the ear, 19.3% of symptoms of vesicle lesions on the ear were more than facial weakness. It can be concluded that the more old age patient can affect the activity of leukocytes including macrophages, monocytes, neutrophils, and eosinophils. The occurrence of functional changes in T cells and monocytes that function as defense against viruses causes VZV reactivation, resulting in Ramsay Syndrome Hunt's disease is rarely found in children <6 years. Can In conclusion, almost all literature said that Ramsay Syndrome Hunt identified with the classic triad, (1) vesicles herpes manifesting on the leaves ear, canal hearing external, tongue, or palate ; (2) pain ear or otalgia; and (3) paralysis nerve face peripheral. It can be concluded that almost all literature said that the standard therapy for Ramsay Hunt Syndrome is a combination of antivirals and corticosteroids.

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