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A Review on Menorrhagia: Investigation, Miracle Role of Herbs and Medical Treatment

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Abstract: ***At some point in her life, one-third of all women experience heavy menstrual bleeding. Approximately 5 percent of reproductive-age women in Western countries will seek treatment for menorrhagia annually. Half of all women treating for hypermenorrhea have a uterine abnormality, most commonly fibroids (in patients under the age of 40) and endometrial polyps (over the age of 40 years). Suitable Co-Treatment for consider improves quality of life of the patients, to have the best care choices, it is important to make a thorough evaluation of the patient. This guideline provides instructions on how fertile-age women who have menorrhagia can be examined and treated. The subject's own appraisal of the amount of menstrual blood loss generally does not reflect the true amount.***

Both patients will undergo a pelvic examination and a vaginal sonography should be done as the most appropriate supplementary test if the menstrual cycle has significantly changed or if anemia is present. Combined with endometrial biopsy, vaginal sonography is a successful method of diagnosing endometrial hyperplasia or carcinoma, but the diagnosis of endometrial polyps and fibroids is insufficient; these can be more reliably diagnosed by sonohysterography or hysteroscopy. Non-steroidal anti-inflammatory drugs and tranexamic acid lower menstrual blood loss by 20 60 percent, and the efficacy of an intrauterine hormonal system (IUS) is comparable to that of endometrial ablation or hysterectomy. Cyclic progesters do not significantly reduce menstrual bleeding in ovulating females.

One of the drug treatments, i.e. the IUS, tranexamic acid, anti-inflammatory medications, or oral contraceptive, will start therapy.

With an effective training and feedback program, diagnosis, medical treatment and monitoring of heavy menstrual bleeding can be arranged in primary health care or in outpatient clinics, reducing the pressure on specialist health service.

Keywords: menorrhagia causes, investigation, diagnosis, herbal treatment, synthetic and surgical treatment.

I. INTRODUCTION

The Menarche is a trademark in adolescence from childhood to puberty. The word "menorrhagia" expresses excessive blood loss menstrual bleeding during the period of women. It is a condition affecting the physical, social, emotional or material quality of life of 20-30% reproductive women up to 50 years of age[**1**]. Average blood loss during menstruation is about 30 to 40 milliliters; a period of 4-5 days of menorrhagia is a loss of more than 80 milliliters of blood in one cycle, or twice the normal loss of the amount. It may flow longer than 67 days at one time.

Menorrhagia is limiting normal activity and two-thirds of women, and may be anemia due to more blood loss due to menstrual bleeding there may be disorders of prostaglandin associated with idiopathic menorrhagia and abnormally severe bleeding due to fibroids or the use of intrauterine devices (IUD)[2]. Fibroids examined by the National Institute for Health and Care Excellence (NICE) were found in 10% of women with menorrhagia and 40 % of women with severe menorrhagia. But half of women with menorrhagia hysterectomy have a normal uterus [3].

Menorrhagia affects about 53 in 1000 women in India. Recently, the World Health Organization (WHO) reported that 18 million women between the ages of 30 and 35 perceive, but now most women between 20 and 30 are affected globally. Despite the fact great majority of women consult with gynecologists and this condition have not basically pathology or abnormality, there are many women are prepared to subject themselves to potent medical or surgical intervention.[4]

The aim of this review article of the literature is to discuss opinion in the investigation and role of herbal and allopathic treatment of menorrhagia. This review concerns the cure of menstrual heavy pain bleeding cycle for which no fundamental cause has been identified (more than 50 percent of cases); this is therefore based on the review article on how we can cure this heavy menstrual bleeding and the treatment aspects of herbal medicines and allopathic medicines affecting and side effects.[4]

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II. SYMPTOMS

The 'abnormal menstrual bleeding 'a normal healthy woman mensuration occurs every 28 days, sometime having a period considered in 21-35 days . In normal case mensuration cycle is about 5 days.
The bleeding may loss more than 80 ml, that's excessive loss it can be detect some symptoms of menorrhagia if you have the following below ;

A. Soaking through that menstrual flow, use more sanitary pads .
B. The need double sanitary protection for do not fall on clothes .
C. The menstrual cycle or period that lasts more than 7 days.
D. The menstrual bleeding includes large blood clots.
E. The daily activities restricting due to heavy pain menstrual flow and uncomfortable life style.
F. May be lead to anemia; like pallor, tiredness, fatigue, shortness of breath. [5]

III. MENORRHAGIA CAUSES

There is a balance between the oestrogen and progesterone in a normal menstrual cycle. These are hormones in the body that help to regulate endometrial build-up (uterine inner lining), which is shed during menstruation each month. [6]
There may be an imbalance in levels of oestrogen and progesterone for menorrhagia. The endometrium develops excessively as a result of the unbalance. The heavy menstrual bleeding eventually occurs when it is shed. As hormone imbalances are often seen in menopause-approximating adolescents and women, this type of menorrhagia is fairly common in these groups.
The uterine fibroids (growths) are another common cause of menorrhagia. Other causes might include:

1) *Hormonal Disturbances:* If the normal fluctuations of progesterone and estrogen change, the endometrium or uterine inner lining may build up too much. During the menstrual bleeding this is then shed.
2) *Ovarian Dysfunction:* No progesterone is released if the ovary does not release an egg, resulting in a hormone imbalance.
3) *Uterine Fibroids:* Non-cancerous, or benign, tumors
4) *Uterine Polyps:* These benign growths can lead to increased levels of hormones.
5) *Adenomyosis:* endometrial glands become embedded in uterine muscle.
6) *Intrauterine Non-hormonal Device (IUD):* This type of birth control device can lead to more severe bleeding than normal.
7) *Pelvic Inflammatory Disease (PID):* A reproductive organ infection that may have severe complications
8) *Complications of Pregnancy:* Examples include a miscarriage or an ectopic pregnancy.
9) *Cancer:* The reproductive system is affected by uterine, cervical, and ovarian cancers
10) *Bleeding Disorders Inherited:* These include Von Will brand disease or platelet function disorder.
11) *Medicines:* Anti-inflammatory and anticoagulant medicines can cause severe bleeding.

Other health conditions likely to trigger menorrhagia include thyroid disorders. [7]

IV. COMPLICATIONS

A. Excessive menstrual bleeding can greatly affect your health and quality of life. The considerable blood loss may lead to anemia. Anemia is a condition where the red blood cells that carry oxygen are absent from your blood. Without blood rich in oxygen, you may feel faint and tired.
B. Excessive menstrual bleeding may also be a symptom of some reproductive cancers and fertility-affected conditions. It's important to get medical attention when women excessive bleeding. [7]

V. INVESTIGATION OF MENORRHAGIA

Clinical History: Symptoms associated with a patient with menorrhagia can often be more obvious than laboratory tests. Taking a detailed history of the patient is imperative, given the lengthy list of possible etiologies that contribute to menorrhagia. Requests to be included are as follows;

A. Exclusion of pregnancy
B. Quantity and quality of bleeding
C. Patient age

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D. Pelvic pain and pathology
E. Menses pattern
F. Sexual activity
G. Contractive use(hormones or intrauterine device)
H. Galactorrhea (pituitary tumor)
I. Presence of hirsutism (polycystic ovarian syndrome)
J. Systemic illnesses (hepatic/ renal failure or diabetes)
K. Symptoms of thyroid dysfunction
L. Excessive bruising or know bleeding disorders.
M. Current medications. [8]

VI. DIAGNOSIS OF MENORRHAGIA:

1) *Laboratory Test:* It should be tests patients' full blood count taken to exclude significant anemia and classified hemoglobin less than 10 mg/dL. Including Follicle Stimulating Hormone (FSH), Luteinising Hormone (LH). [9]
2) *Ultrasound :* to check the event of abnormal findings , imaging modalities by Transadominal and transvaginal , and then check the thickness of follicular phase range from 4 -16mm and endometrial thickness 10 mm grather than 15mm.
3) *Endometrial Biopsy and Hysteroscopy:* the examination of endometrial cavity, lower segment and cervical canal. Biopsy is the diagnostic test of intrauterine pathology when at 45 age.
4) *Thyroid Function Test:* General examination.
5) *Pelvic Examination:* Uterine size, shape, and contour cervical motion tenderness Adnexal tenderness or masses. [10]

VII. SYNTHETIC DRUG TREATMENT

Menorrhagia specific therapy is based on a number of factors including:

1) Your general history of health and medicine.
2) Why and how severe the condition.
3) Your tolerance to specific medicines, procedures or treatments.
4) The probability of your periods getting less heavy soon.
5) Your future plans on childbearing.
6) Condition impacts on your lifestyle.
7) Your personal opinion or preferences. [11]

A. Nonsteroidal Anti-inflammatory Drugs

The first-line medical therapy in ovulatory menorrhagia is the non-steroidal anti-inflammatory drugs (NSAIDs). Studies show an average reduction in menstrual blood flow of 20-46 per cent. [12] NSAIDs reduce levels of prostaglandin by inhibiting cyclooxygenase and decreasing the prostacyclin to thromboxane ratios. NSAIDs are ingested over the entire cycle for only 5 days, limiting their most common adverse effect of stomach upset. [13]

B. Oral Contraceptive Pills

Oral contraceptive pills (OCPs) for women who want contraception are a popular first-line therapy. Menstrual blood loss is reduced as effectively as NSAID's secondary to endometrial atrophy. [14] The OCPs suppress the release of pituitary gonadotropin to prevent ovulation. Common adverse effects in some individuals include breast tenderness, pervasive bleeding, nausea, and possibly related weight gain. A long-term combination of oral estradiol valerate and dienogest in the treatment of women with heavy menstrual bleeding was found to be highly effective when compared with placebo. The oral contraceptive approved by FDA in march 2012, dianogest/estradiol valerate (Natazia),it for heavy menstrual bleeding. [15]

C. Progestin Therapy

The most frequently prescribed drug for menorrhagia is progestin. When used alone, treatment with this drug results in a significant reduction in menstrual blood flow. Progestin works as an anti-estrogen by minimizing the effects of estrogen on target cells, thus keeping the endometrium in a down-regulated state. Common adverse reactions include weight gain, headaches, edema and depression. [16]

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D. Levonorgestrel Intrauterine System

The intrauterine levonorgestrel system reduces menstrual blood loss by as much as 97 percent [17].It is comparable to the endometrial transcervical resection for menstrual bleeding reduction [18,] Adverse effects include uterine bleeding or spotting, headache, ovarian cysts, vaginitis, dysmenorrhea and breast tenderness.

E. Gonadotropin-releasing Hormone Agonists

Because of high costs and severe adverse effects these agents are used on a short term basis. GnRH agonists are effective in reducing blood flow through the menstruation. They inhibit the release of pituitary FSH and LH, resulting in hypogonadism. A prolonged hypo estrogenic state leads to demineralization of the bone and reduction of cholesterol in the high density lipoprotein (HDL). [19]

F. Danazol

Danazol competes with androgen and progesterone at receptor level and causes amenorrhea within 4-6 weeks. Androgenic effects result in acne, lower breast size and, rarely, lower voice. [20]

G. Conjugated Estrogens

Those agents are administered intravenously in patients with acute bleeding every 4 hours. If no response is noted within 24 hours a D&C procedure may be necessary. When menses slow, follow up with 7 days of estrogen-progestin therapy. That is followed by 3 months of OCPs. [21]

H. Tranexamic Acid

Tranexamic acid (Lysteda) was the first no hormonal product approved by the FDA (in November of 2009) for the treatment of heavy menstrual bleeding. It is a synthetic derivative of lysine that uses antifibrinolytic effects by inhibiting the activation of plasminogen to plasmin.

Tranexamic acid's mechanism of action in treating heavy menstrual bleeding is by prevention of fibrinolysis and the breakdown of clots via inhibiting endometrial plasminogen activator.

In a double-blind, placebo-controlled study, women taking 3.9 g/d of tranexamic acid showed a significant reduction in menstrual blood loss and an increase in their health-related quality of life compared with those taking placebo. [38] Common adverse effects include menstrual discomfort, headache, and back pain.

A Cochrane study reviewed data from a non-randomized study that found value in combining desmopressin and tranexamic acid; however, these results need further study. [22]

VIII. HERBAL TREATMENT

The herbal supplements traditionally used vriouses disorders, hormonal imbalance, infctions etc; It can treat menorrhagia, goals of alternative therapies, and the knowledge of ayurvedic medicine Menorrhagia is identical to conventional targets Treatment: Bleeding control, anaemia prevention and treatment, And restore menstrual pattern, the normal mensuration cycle.

SERIAL NO.	HERBAL DRUG	BIOLOGICAL NAME OR SCIENTIFIC NAME & FAMILY	TREATMENT OF HEAVY MENSTRUAL BLEEDING (REDUCE OFMENORRHAGIA)
1.	Ashoka[23]	*Saraca indica* Linn (Leguminosae)	Bleeding hemorrhoids, bleeding ulcers, and for hemorrhagic dysentery uterine fibroids. [33]
2.	Nux – vomica[23]	*Strychnos nux vomica* Linn (Loganiaceae)	Menses too early, profuse, remove dark colored blood, abdomen pain. [34]
3.	Ergot [23]	*Claviceps purpurea* (Hyocraceae)	Haemorrhage; puerperal uterus. [35]
4.	Ginger [23]	*Zingiber officinale* (Zingiberaceae)	Dysmenorrhea, control of blood loss; anemia [36,46,47]

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5.	Parsley [24]	*Petroselium crispum* (Apiaceae)	Menstrual problems, UT Infections. [38,39]
6.	Cinnamon tea [23]	*Cinnamomum cassia* (Lauraceae)	Reduce crushing menstrual cramps. [37]
7.	Papaya [23]	*Carica papaya* (Caricaceae)	Reduce or lighten periods. [40]
8.	Sesame oil [23]	*Sesamum indicum* (Pedaliaceae)	Oligomenorrhea. [41]
9.	Marigold [26]	*Tagetes erecta* (Asteraceae)	Cervical infections, evaluation of pelvis organs (uterus ,ovaries) [42]
10.	Amla [23]	*Emblica officinalis (Euphorbiaceae)*	Control of blood loss; anemia. [42]
11.	Gooseberry [27]	*Ribes uva-crispa* (Grossurlariaceae)	Hormonal imbalance, uncontrolled bleeding. [44]
12.	Mustard seed [23]	*Brassica juncea* L.Czern [indian](Cruciferae)	Excessive bleeding, [48]
13.	Banana flower [32]	*Musa acuminate,* etc (Musaceae)	Increase progesterone and help control bleeding.
14.	Liquorice [25]	*Glycyrrhiza glabra*Linn. (leguminosae)	Arresting excessive blood flowin periods. [25]
15.	Mango bark [28]	*Mangifera indica* (Anacardiaceae)	Arresting excessive periods. [43,28]
16.	Jujube tea [29]	*Ziziphus mauritiana* (Rhamnaceae)	Stopping excessive menstrual bleeding. [29]
17.	Hemp [32]	*Cannabis sativa* Linn.(Cannabaceae)	Reduce crusing menstrual cramps. [49]
18.	Rough chaff[31]	*Achyranthes aspera* (Amaranthaceae)	Stoping heavy bleeding in periods. [48]
19.	Hawthorn[30]	*Rhaphiolepis indica* (Rosaceae)	Abdominal pain, discharge blood clots, arresting excessive flow. [48]
20.	Tenner's cassia [32]	*Senna auriculata* (Fabaceae)	Regulating the menstrual cycle ,controlling excessive flow [48]
21.	Figs [32]	*Ficus carica* (Moraceae)	Menstrual disorders, abdominal pain. [45]

IX. SURGICAL TREATMENT

Surgical treatment may be necessary where there is pelvic pathology as a cause of heavy menstrual bleeding, such as Review polyps or endometriotic masses, but these procedures are not specifically covered in this review. Surgery is also indicated when medical treatment is not tolerated, ineffective or when it is the patient's choice. There are two main types of surgery used in the management of menorrhagia, namely hysterectomy and endometrial ablation.

A. Hysteroscopy

Hysteroscopy removal of sub mucous myomas and polyps, Removing a sub mucous myoma through resection produces a satisfactory result for 70 90 percent of patients. [59] 20 30 per cent of these patients must undergo another operation within 3 years. A large uterus, a high number of myomas, and a disadvantageous myoma location in the myometry (over 50%) are factors that increase the need for reoperation. [60] More than 10 per cent of all women who are premenopausal have asymptomatic polyps. [65] Small polyps can sly spontaneously disappear. Within 3 years of diagnosis, only 10 percent of polyps cause symptoms. [61] Some 80% of women with severe menstrual bleeding benefit from polyp removal to some extent. The probability of cancer is 0.5 percent in removed polyps. [62] Of all hysteroscopy interventions. Bleeding, uterine perforation and adnexal damage, and liquid medium absorption and retention in the body are the most common. Infections occur in patients in 0.6 1.3 per cent. As a late complication, hematometra may follow. The possibility of normal pregnancy is preserved after myoma resection and polyp removal. It can be considered embolization or open removal of voluminous myomas. [63,64, 66].

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B. Endometrial Ablation

This treatment destroys or removes most of the lining of your womb (endometrium). It works to reduce your heavy menstrual bleeding or in many cases it actually causes you to stop having any more periods. [67]

This operation is usually done as day surgery. A small instrument is passed into your womb via your vagina. The aim is to remove as much of the lining of your womb as possible. Endometrial ablation operations vary by the method used to destroy or remove the lining of your womb. The different methods available include:

1) *Microwave:* In this method, a slender wand that emits microwaves is placed into your womb, which works to increase the temperature of the lining of your womb to destroy it.
2) *Extreme Cold:* This is also called cryoablation and this method uses extreme cold to create two or three ice balls that freeze and destroy the lining of your womb.
3) *Bipolar Radiofrequency:* The instrument that is placed into your womb puts out short waves of energy that destroy the lining of your womb.
4) *Electrosurgery:* This method uses heat to destroy the lining of your womb. A small instrument which can be a roller ball or a wire loop becomes hot. It is then used to carve grooves into the lining of your womb.
5) *Heated Balloon:* A balloon device is inserted through the neck of your womb and then inflated with fluid which is heated.

Although endometrial ablation prevents women from having children in the future, it cannot actually be relied on as contraception. This is because there have been some cases of women becoming pregnant after this operation.

Endometrial ablation is not usually recommended if you have large fibroids or if you want to have children in the future, as it can affect your fertility. It can be an option if you have small fibroids however. Following this type of surgery, you may have some discomfort in your lower tummy (abdomen), which is usually eased by taking painkillers. You will need to wear a sanitary towel for a few days after the operation, as it is common to have some vaginal bleeding. You will usually be able to go home on the same day when you feel ready. Most women are able to return to most normal activities in 3-5 days. Having sex (intercourse) and doing very strenuous activities should be avoided for around two weeks following this type of surgery. It is normal to have an increased vaginal discharge for 2-4 weeks after the operation. You should avoid using tampons for at least one month after having an endometrial ablation, to help reduce your risk of infection. If you develop any prolonged vaginal bleeding, offensive smelling discharge, severe pain or a high temperature (fever), you should contact your doctor as soon as possible. These symptoms may be due to an infection, which can be treated with antibiotics. [68]

C. Combination Therapies

Insufficient evidence exists on the effectiveness of mixed therapies. Since drug therapies have various mechanisms of Action, different drugs may be used in combination, if Does not achieve sufficient effect with 1 drug. Because oral contraceptives, or hormonal IUS for example canbe combined with either, tranexamic acid or anti-inflammatory acid Drogues. can be used in combination with hormonal IUS with destruction of the endometrial. It can just be inserted upon or after the procedure, if necessary. [69]

D. Dilatation and Curettage (D&C)

A procedure in which the uterus lining upper layer is removed to reduce menstrual bleeding. Over time this procedure could need to be repeated. Menorrhagia is prevalent among women. But, a lot of women don't know they can get any help. Others don't get help because they're too embarrassed to discuss their issue with a doctor. It's very important to talk openly with your doctor to make sure you're diagnosed correctly and get the right treatment. [69]

X. CONCLUSIONS

Menorrhagia is a disorder which could adversely affect women's quality of life. The both primary care and gynecological departments with effective therapies this can be resolved in the initial stages investigated. [70] The management should aim to reduce menstrual flow , improve quality of life and reduce the likelihood of iron deficiency anemia once another pathology has been excluded. However, they should investigate the definite cause of menorrhagia. Women with menorrhagia should be given proper care along with medical interventions, herbal treatment and surgical treatment. [71] Treatment for complications should be provided at the initial stages. Intrauterine device has been found to be acceptable as it has shown more adherences and therefore it is considered the first line of menorrhagia treatment. Combined oral contraceptive pills and tranexamicacid were discovered as second line therapy choice.

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That the in counseling women regarding investigation and clinical history and treatment options for their menorrhagia (heavy menstrual bleeding);risks and benefits for each treatment discussed with patients, to allow women to be a positions to that their preferences. [72]

Future research should focus on qualitative research to understand patient's experience with menorrhagia, which will be better for effectiveness of the care and treatment provided.

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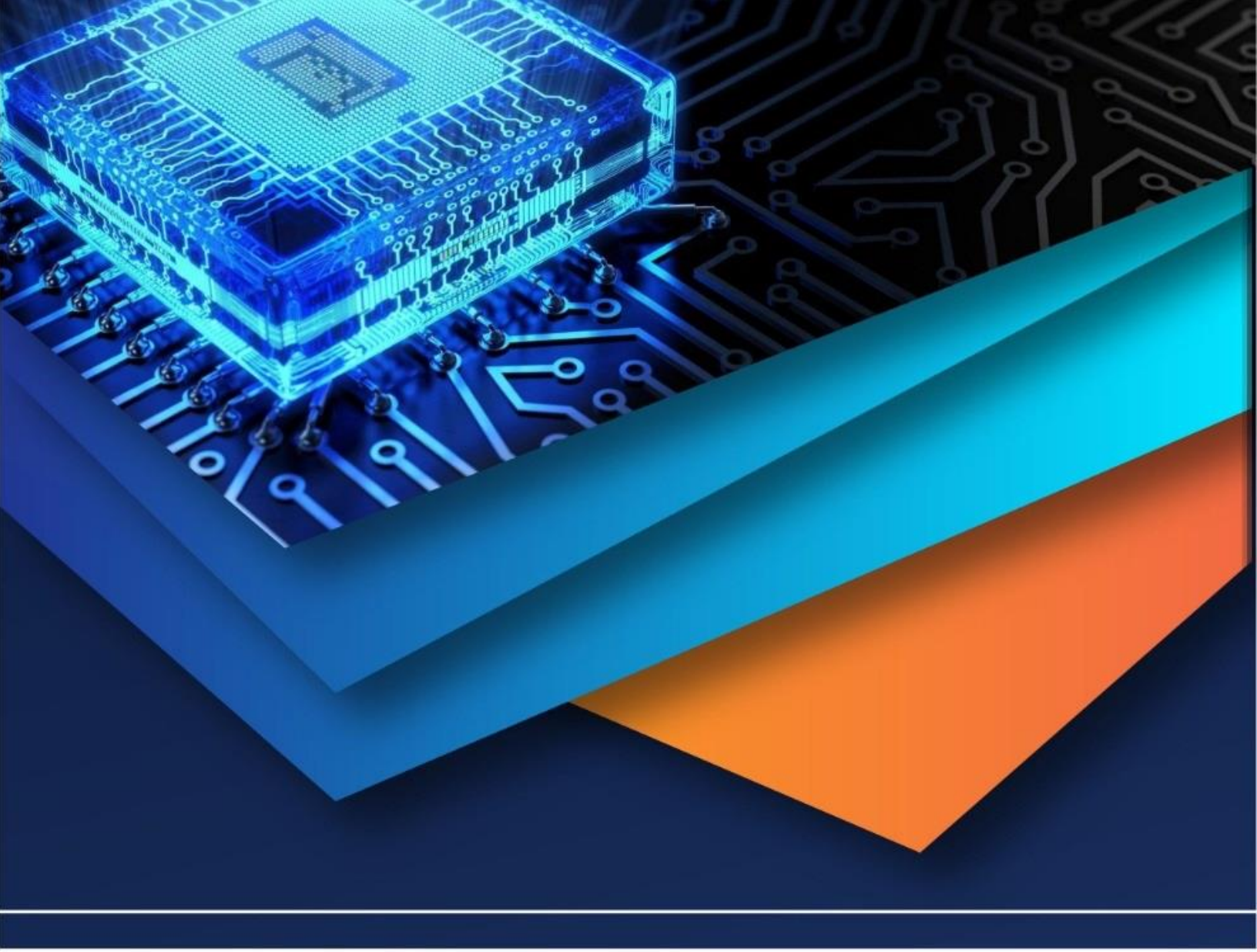

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