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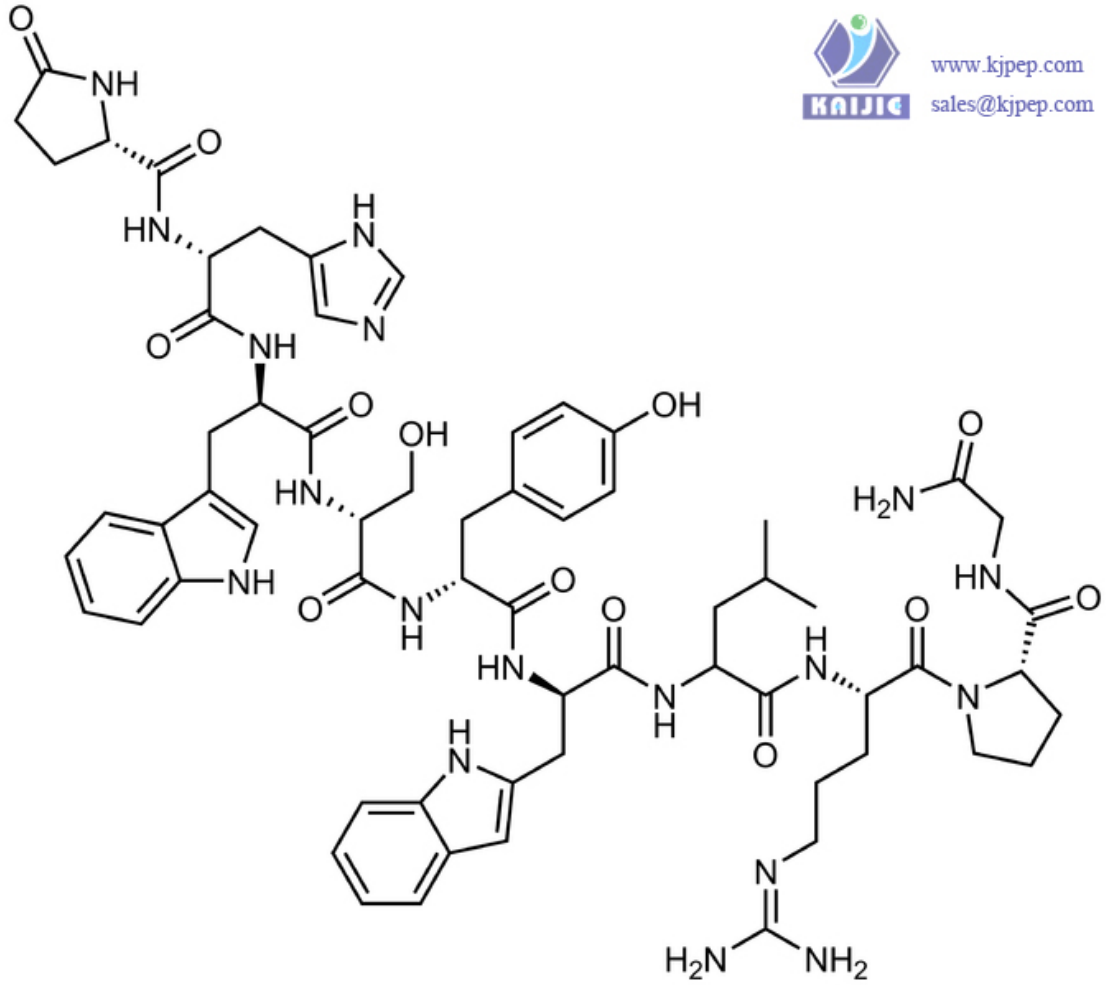
About Author

Chengdu Kaijie Biopharm Co, Ltd. (KJBP) is one of leading peptide manufacturers in Asia. With its highest capacity of production in China and the outstanding quality of peptide products, Kaijie holds a unique position.

Triptorelin



1.1.A Triptorelin Pamoate

1.1.A.1 Intramuscular route

1.1. A.1.a Carcinoma of prostate, Palliative treatment, advanced disease

1) The recommended dose of **triptorelin** pamoate for injectable suspension (depot formulation) is 3.75 mg intramuscularly every month

2) The recommended dose of **triptorelin** pamoate for injectable suspension (long-acting formulation) 11.25 mg intramuscularly every 84 days

1.1. A.1.b Endometriosis

1) In the treatment of endometriosis, **triptorelin** has been given in doses of 500 micrograms/day subcutaneously for 11 to 18 days (conventional preparation), followed by 3.2 milligrams intramuscularly every 30 days (microsphere formulation)
2) **Long**-acting **triptorelin**, in 6 consecutive doses of 3.75 milligrams administered intramuscularly every 4 weeks (beginning in the first week of the menstrual cycle), has also been used alone in the treatment of endometriosis

1.1. A.1.c In vitro fertilization

1) Half-doses (1.87 milligrams intramuscular) were as effective as standard doses (3.75 milligrams intramuscular) of **triptorelin** for producing adequate pituitary suppression prior to ovarian stimulation for in vitro fertilization. There were no differences between groups in the doses of gonadotropins required, the number of oocytes retrieved, the number of embryos available for transfer, or in pregnancy rates
2) To induce pituitary suppression prior to ovarian stimulation with human menopausal gonadotropin (HMG) in in vitro fertilization programs, **triptorelin** 3.2 milligrams has been given as a single intramuscular dose on day 1 or 3 of the menstrual cycle. Ovarian stimulation with HMG has been initiated when estradiol levels decrease to less than 35 or 40 picograms/milliliter (usually 3 weeks after **triptorelin** administration). Human chorionic gonadotropin (HCG) has been given when leading follicles reached a diameter of 18 millimeters or more and estradiol levels were rising
3) The period for pituitary desensitization with GnRH agonists, such as **triptorelin** 3.75 milligrams in a single intramuscular injection, can be shortened to 15 days and can begin irrespective of the patient's menstrual cycle phase, without affecting ovarian response and cycle performance

1.1. A.1.d Ovarian carcinoma

1) **Triptorelin** microspheres in monthly intramuscular doses designed to release 100 micrograms daily (total injection dose unspecified) have been used in the treatment of advanced ovarian carcinoma. Many patients in these studies initially received subcutaneous doses of 100 micrograms daily of the conventional preparation (for 7 to 30 days prior to starting monthly microsphere injections).
2) In one trial, intramuscular injections were given on days 1, 8, and 28 during the first month, then once monthly thereafter, without prior subcutaneous doses
3) A phase III trial is in progress to evaluate the efficacy of **triptorelin** as first-line therapy in advanced ovarian carcinoma (n=200). **Triptorelin** is being given in doses of 500 micrograms daily subcutaneously for 7 days initially (conventional preparation) followed by 3 milligrams intramuscularly every 28 days (microsphere formulation)

1.1. A.1.e Uterine leiomyoma

1) **Triptorelin** microspheres 3.75 milligrams intramuscularly every month for 3 to 6 months have been used in the treatment of uterine fibroids.
2) In a 2-step regimen for the treatment of uterine leiomyomas, subcutaneous **triptorelin** (conventional preparation) 500 micrograms was administered daily for one week followed by 100 micrograms daily for 7 weeks. In the second step, the patients were randomized to daily doses of 5, 20, or 100 micrograms for the following 18 weeks. The benefits of the initial high-dose treatment were prolonged by the 18-week low dose treatment and no significant differences between dosages were found in overall reduction in uterine volume
3) **Triptorelin** pamoate is not indicated for use in women

1.1. A.2 Subcutaneous route

1.1. A.2.a Carcinoma of prostate, Palliative treatment, advanced disease

1) **Triptorelin** in doses of 1000 micrograms subcutaneously daily for 7 days, followed by 100 micrograms subcutaneously daily thereafter for up to 18 months, has been used in the treatment of advanced prostatic carcinoma

1.1.A.2.b Endometriosis

1) In the treatment of endometriosis, **triptorelin** has been given in doses of 500 micrograms/day subcutaneously for 11 to 18 days, followed by 3.2 milligrams intramuscularly (microsphere formulation) every 30 days

1.1. A.2.c In vitro fertilization

1) Fifteen micrograms (mcg) of **triptorelin** acetate daily was adequate in one study (n=42) to prevent luteinizing hormone surges during in-vitro fertilization stimulation cycles. Fifty and 100 mcg were also effective; 50 mcg was more than necessary and may have had a negative effect on oocyte retrieval. Five mcg was insufficient to control timing of ovulation
2) Subcutaneous **triptorelin** has been used with human menopausal gonadotropin (HMG) for in vitro fertilization protocols. In one large series, norethindrone was administered prior to **triptorelin** in doses of 10 milligrams daily (beginning on the second day of the preceding cycle) for 14 to 21 days; norethindrone was stopped on a Monday to enable programming of the first day of stimulation. The following Friday (day 1), HMG and **triptorelin** were given; HMG 150 units intramuscularly was administered on days 1 to 4 and **triptorelin** 100 micrograms daily subcutaneously was continued up to the day of ovulation induction with human chorionic gonadotropin

1.1. A.2.d Ovarian carcinoma

1) Subcutaneous **triptorelin** 100 micrograms daily has been administered for 7 to 30 days prior to starting monthly injections of the microsphere formulation in patients with advanced ovarian carcinoma
2) A phase III trial is in progress to evaluate the efficacy of **triptorelin** as first-line therapy in advanced ovarian carcinoma (n=200). **Triptorelin** is being given in doses of 500 micrograms daily subcutaneously for 7 days initially followed by 3 milligrams intramuscularly every 28 days (microsphere formulation)

1.2 Dosage in Renal Failure

A) Triptorelin Pamoate

1) Patients with renal impairment have shown 2- to 4-fold higher exposure than young healthy males. The clinical consequences of this and the need for dosage adjustment are unknown.
2) Dosage reduction of sustained-release **triptorelin** does not appear to be necessary in patients with renal insufficiency. As compared to 6 healthy young males, 6 patients with mild to moderate renal insufficiency (20 to 60 milliliters/minute (mL/min) creatinine clearance) had reduced total clearance (113 versus 210 mL/min) and prolonged elimination half-life (6.6 versus 2.8 hours) after a single intravenous bolus of 0.5 mg **triptorelin**. Total clearance and elimination half-life were 87 mL/min and 6.6 to 7.7 hours, respectively, in 6 patients with severe renal impairment (less than 20 mL/min creatinine clearance). Despite these differences after intravenous dosing, the authors concluded that dose reduction of the sustained-release formulation used clinically is not necessary, because its release rate is much slower than its elimination rate

1.3 Dosage in Hepatic Insufficiency

A) Triptorelin Pamoate

1) Patients with hepatic impairment have shown 2- to 4-fold higher exposure than young healthy males. The clinical consequences of this and the need for dosage adjustment are unknown
2) Dosage reduction of sustained-release **triptorelin** does not appear to be necessary in patients with liver disease. As compared to 6 healthy young males, 6 patients with normal renal function and hepatic impairment (Child Class A or B) had decreased total clearance (57 versus 210 mL/min) and prolonged elimination half-life (7.6 versus 2.8 hours) after a single intravenous bolus of 0.5 mg **triptorelin**. Despite these differences after intravenous dosing, the authors concluded that dose reduction of the sustained-release formulation used clinically is not necessary, because its release rate is much slower than its elimination rate

2. Pediatric Dosage

2.1. A.1.a Central precocious puberty

1) Dosage Summary

a) Usual dose, 60 to 75 micrograms/kilogram (range, 50 to 100 micrograms/kilogram) or 3.75 milligrams every 25 to 30 days for up to 5 years

2) General Dosing Information

a) Supplemental calcium 1 gram daily in 2 divided doses may be useful in improving bone densitometric levels and preserve better peak bone mineral achievement

b) **Triptorelin** pamoate is not indicated for use in pediatric patients